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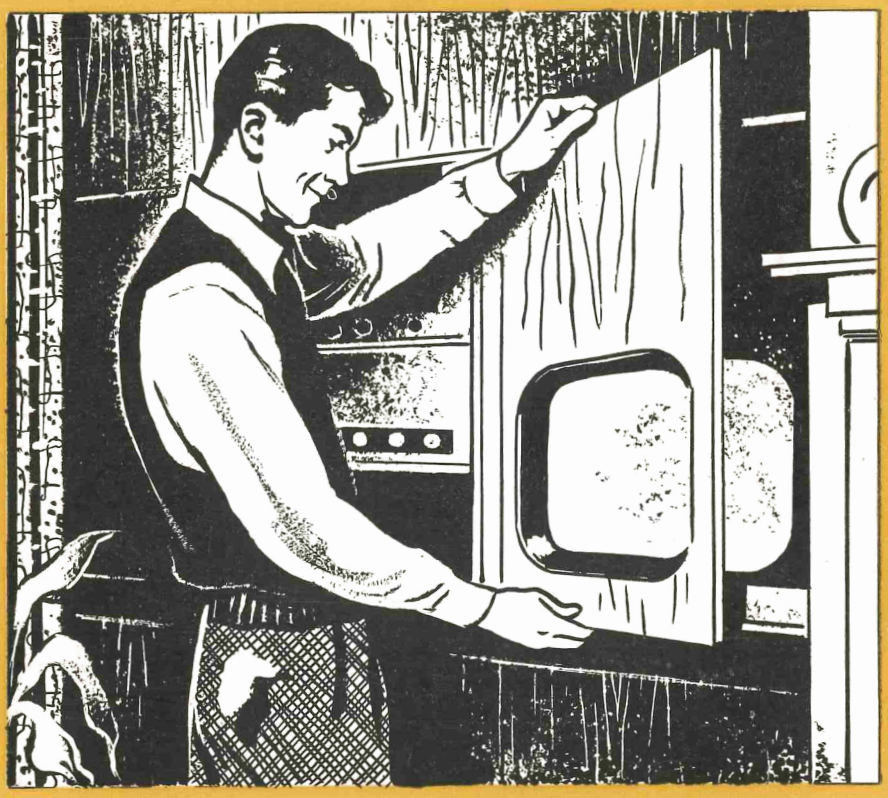

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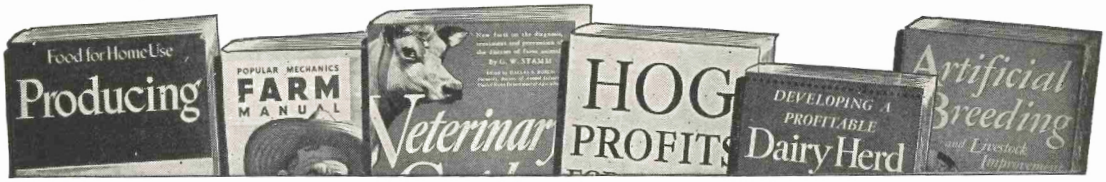

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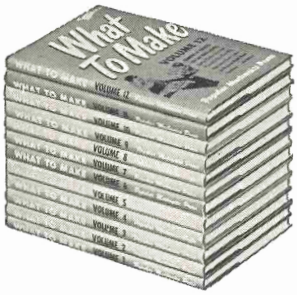

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Do-It-Yourself Booklet No. 9

BUILT-IN FURNITURE for your home

Popular Mechanics Press

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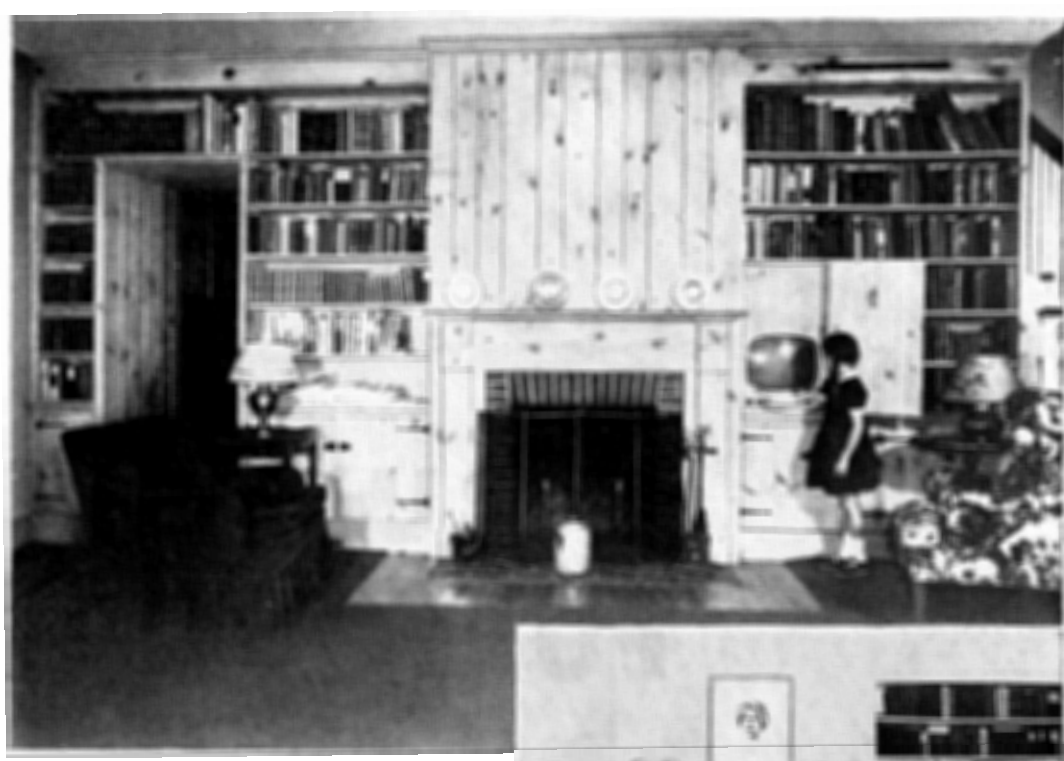
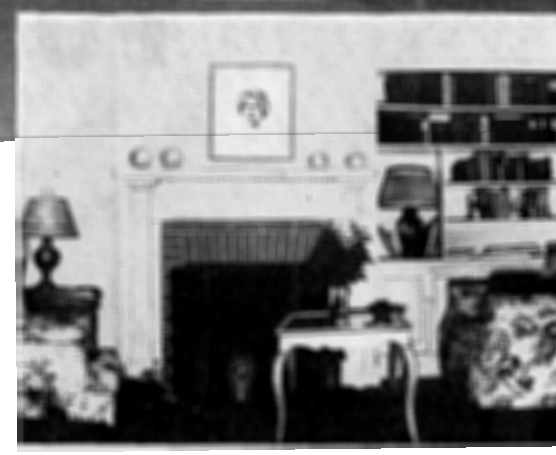




BOOKSHELF WALL FEATURES BUILT-INS

THE TV SET, radio, record player and assorted bookcases and magazine racks that once cluttered up this living room, are now incorporated in the knotty-pine bookshelf wall pictured above. Not only does this unusual wall treatment add new life to an otherwise ordinary room, but it increases the actual living area of the room to a surprising extent. In this case the fireplace was especially well suited to this type of wall but, with or without a fireplace, you can accomplish the same thing by redesigning the wall to serve your purpose. In addition to saving space in the living room and increasing storage space for odds and ends, the bookshelf wall is a practical work saver, as it conceals any number of dust catchers under one roof. In this installation a deep utility closet was installed directly in back of the bookshelves at the left of the fireplace.

A door of V-joint, knotty-pine boards, located just to the right of the fireplace, closes over the TV screen and, next to this, three hinged bookshelf sections permit access to FM-radio and amplifier control panels, plus a 3-speed record player which is mounted on a sliding drawer. The hinged bookshelf sections actually are false book backs fastened to panels of ¼-in. plywood. Opening the pair of cabinet doors below the electronic equipment reveals a high-fidelity speaker. The other cabinets beneath the bookshelves are ideal for storing records, games, toys, magazines and all those things for which you ordinarily don't seem to find room.

If your fireplace extends a couple of feet into the living room, as this did, you will have no problem in attaining the depth necessary for installation of the TV set. However, if the fireplace projects only a

If fireplace wall tends to become warm, it is best to apply insulation between wall and television set

Knotty-pine plywood is nailed to 2 x 2 studs, as in photo above. Space behind TV and radio is left open

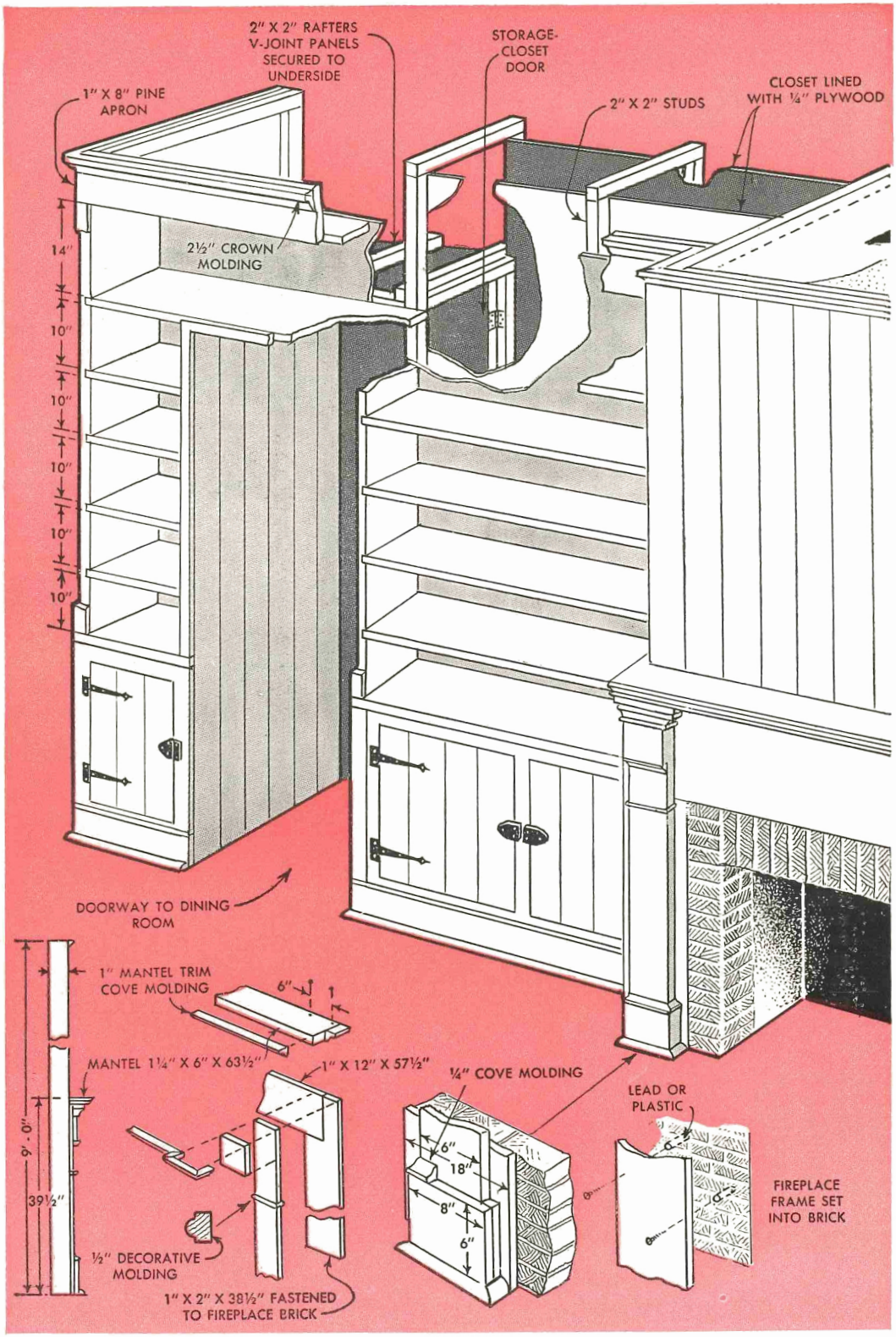
few inches from the wall, it may be necessary to knock out the wall and move it back the required distance, or cut through the wall and allow the TV chassis to extend into an adjoining closet. Because every installation is bound to be different, these are things you will have to work out for yourself. Keep in mind that the top of the TV screen should be about 42 in. above the floor, and check the dimensions of the TV chassis carefully to be sure that sufficient room, especially depth, is available.

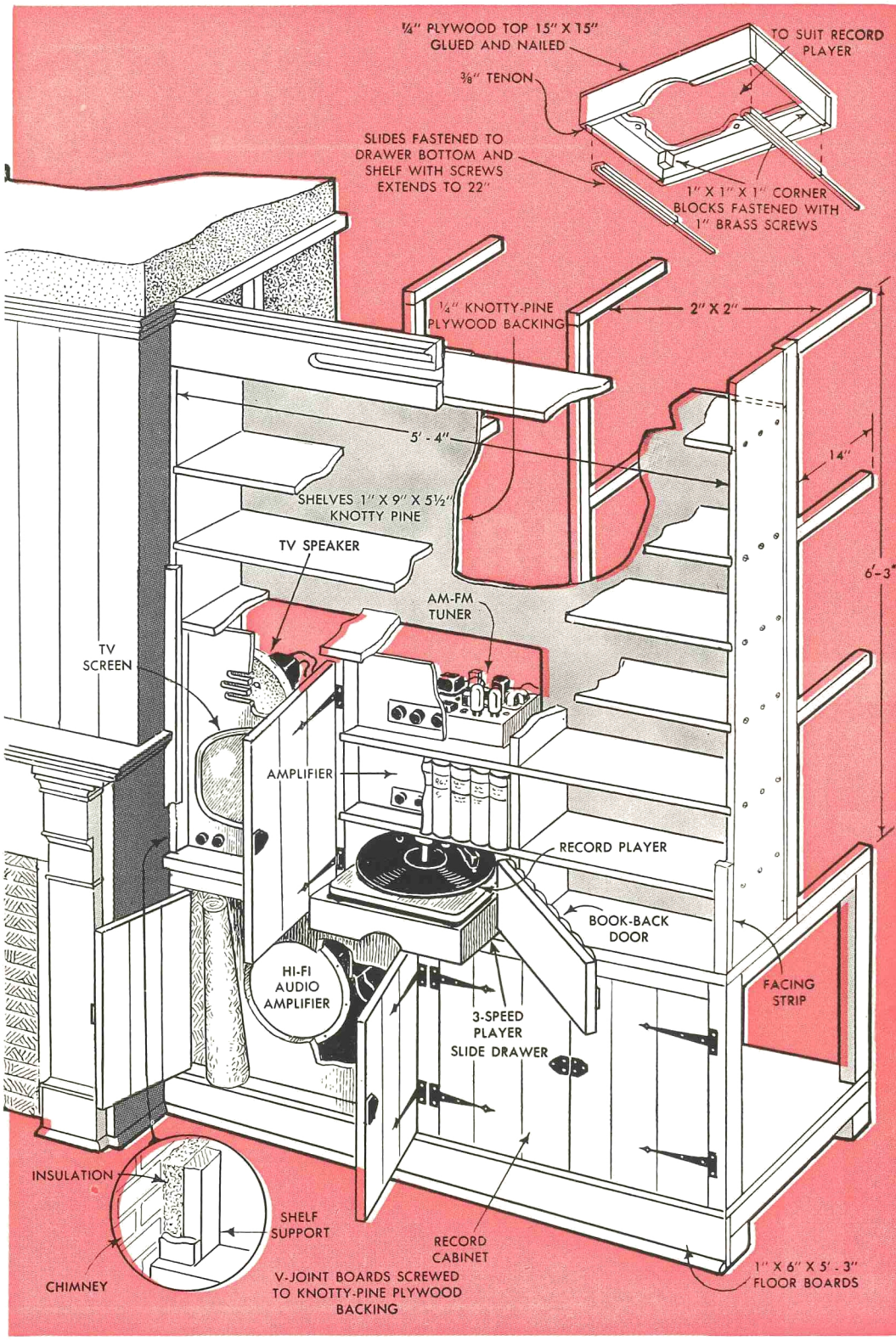
The cutaway detail on the next two pages will give you an idea of the general construction of a bookshelf-wall unit. Note that the shelf framing on the TV side of the fireplace is braced with lengths of 2 x 2. The braces are nailed to horizontal cleats which have been nailed to the wall studs.

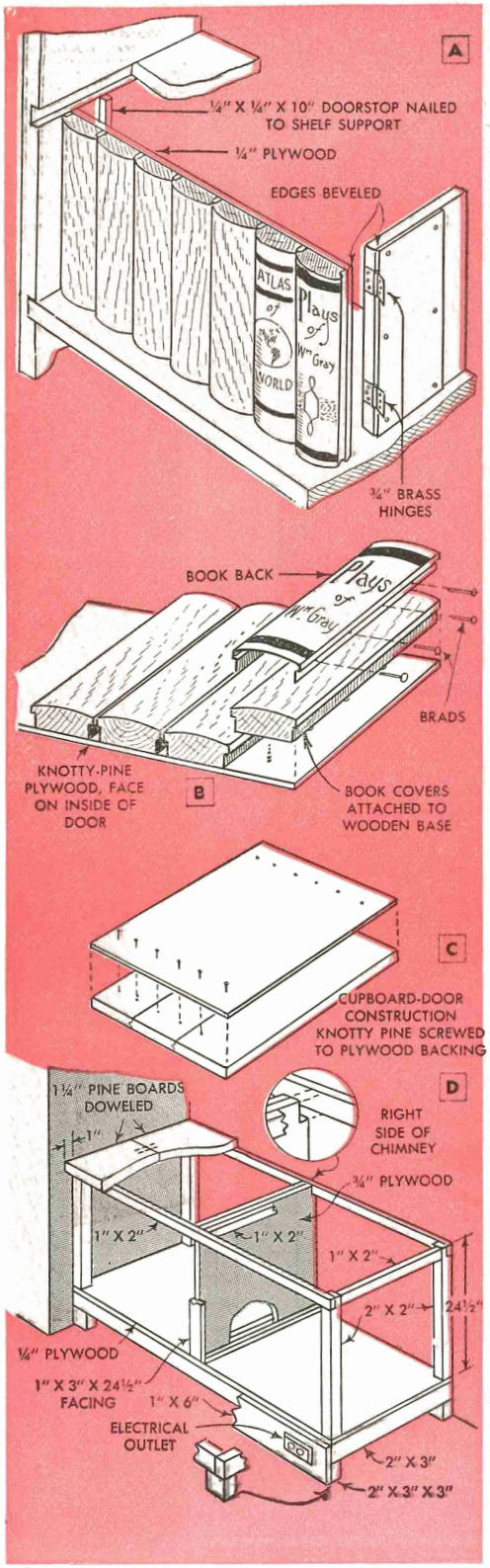
The bottoms of the lower cabinets are raised about 6 in. above the floor, so armored cable can be brought under them for wiring the electronic equipment as well as several conveniently located electrical outlets. The fronts of the cabinet bases are covered with 1 x 6 knotty-pine boards and quarter-round shoe molding. Construction of the cabinets is shown in detail D, page 6, and cupboard-door construction is illustrated in detail C.

The bookshelves are backed with panels of ¼-in. knotty-pine plywood. This paneling is cut to leave the area directly behind the electronic equipment open, thus allowing heat from the equipment to escape by passing upward behind the bookshelves and out through a long slot cut in the 1 x 8 apron which runs across the top of the shelf section. Ventilation is important, as the heat from the tubes, if confined, will shorten the lives of condensers and other parts of the equipment. The ends of the shelves

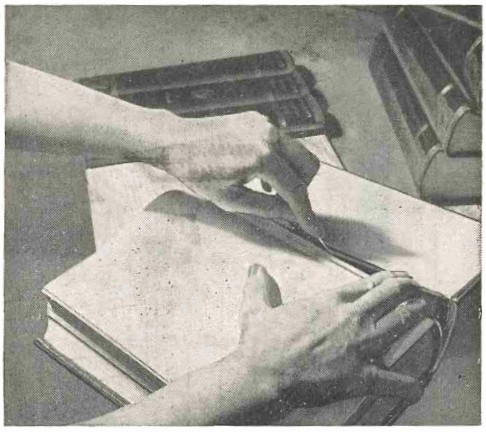
TV set, manufactured by Industrial Television, Inc., is fitted with plywood panel, above. Radio-phono combination, below, was prepared by Lafayette Radio


2" X 2" RAFTERS
V-JOINT PANELS
SECURED TO
UNDERSIDE
STORAGE-
CLOSET
DOOR
1" X 8" PINE
APRON
2" X 2" STUDS
CLOSET LINED
WITH ¼" PLYWOOD
2½" CROWN
MOLDING
14"
10"
10"
10"
10"
10"
DOORWAY TO DINING
ROOM
1" MANTEL TRIM
COVE MOLDING
6"
1
MANTEL 1¼" X 6" X 63½"
1" X 12" X 57½"
¼" COVE MOLDING
LEAD OR
PLASTIC
9' - 0"
39½"
6"
18"
8"
6"
FIREPLACE
FRAME SET
INTO BRICK
½" DECORATIVE
MOLDING
1" X 2" X 38½" FASTENED
TO FIREPLACE BRICK


¼" PLYWOOD TOP 15" X 15" GLUED AND NAILED
TO SUIT RECORD PLAYER
⅜" TENON
SLIDES FASTENED TO DRAWER BOTTOM AND SHELF WITH SCREWS EXTENDS TO 22"
1" X 1" X 1" CORNER BLOCKS FASTENED WITH 1" BRASS SCREWS
¼" KNOTTY-PINE PLYWOOD BACKING
2" X 2"
5' - 4"
14"
SHELVES 1" X 9" X 5½" KNOTTY PINE
TV SPEAKER
6'-3"
AM-FM TUNER
TV SCREEN
AMPLIFIER
RECORD PLAYER
BOOK-BACK DOOR
HI-FI AUDIO AMPLIFIER
FACING STRIP
3-SPEED PLAYER SLIDE DRAWER
INSULATION
SHELF SUPPORT
RECORD CABINET
CHIMNEY
V-JOINT BOARDS SCREWED TO KNOTTY-PINE PLYWOOD BACKING
1" X 6" X 5' - 3" FLOOR BOARDS



Book-cover backs cemented to wood blocks simulate rows of books. Blocks are screwed to plywood panels

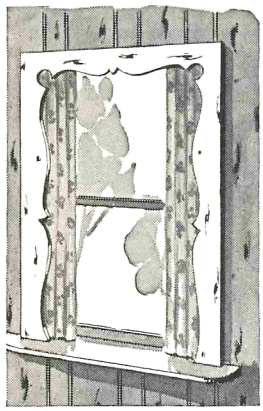


Entire book cover is removed with razor blade and both covers are cut off about 1 in. from the back

fit into grooves cut in the inside faces of the vertical side boards. If the shelves are quite long, they should be supported at intervals along their length to prevent sagging under the weight of the books. This can be done by installing short lengths of board vertically between the shelf boards or by driving long wood screws through the 2 x 2 studs and into the shelf edges.

If the fireplace brick tends to become warm, the area between the fireplace and the electronic equipment should be insulated to keep the equipment as cool as possible. Construction of the false bookshelf doors for the control panels and record player is shown in details A and B. The photos above picture how covers from old books are removed and glued to shaped wooden blocks to simulate actual books. If you like, paper book jackets may be used instead of covers.

Ceiling-high cornice covered with fabric to match draperies brightens alcove, above. Sides and top of window, below, are decorated with scrolled cornice



THE NEW TREND— Window Cornices

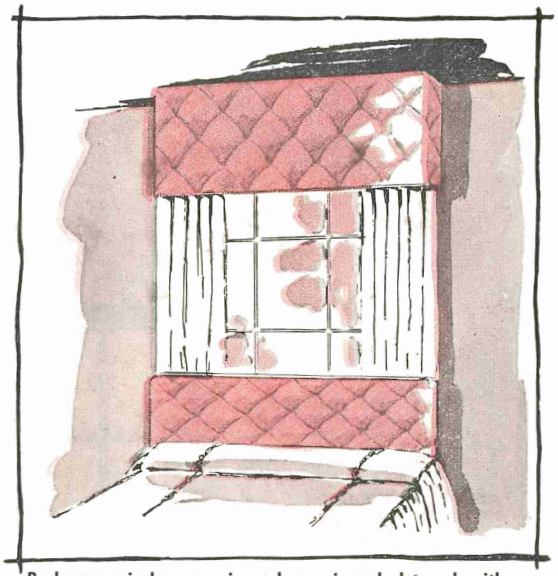
CORNICES ARE BECOMING more and more important as a decorator's aid for creating a wide variety of pleasing effects in the home. They are used to accent windows, give the effect of a longer or shorter wall or a lower ceiling, to conceal drapery hardware, exhaust fans and lights and to change the center of interest in a room. If you are thinking about putting up cornices in your home, consider all the different types and their intended uses before making your selection.

Smart cornices in vogue today often extend from window to ceiling, and many are covered with fabric to match or contrast with the draperies, furniture coverings or other room appointments. Other cornices are wallpapered, painted or covered with plastic fabric. The dominant period motif of the furniture often can be followed in the shape and design of the cornice. To relieve large unbroken window areas, cornices

sometimes are extended down both sides of the window, either to the sill or the floor. Instead of using separate cornices over the windows of a bay, you frequently can use one for the entire span, achieving a pleasing alcove effect.

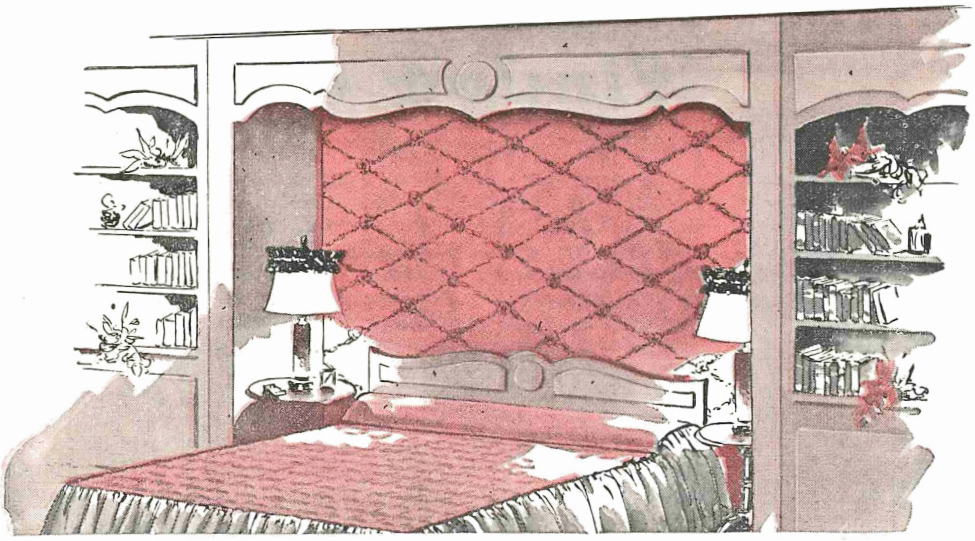
But the use of cornices is not limited to the living-room and dining-room areas. They have applications throughout the house. In the kitchen, a cornice over the range can be used to conceal the exhaust fan and also may provide a mounting board for a kitchen clock. Cornices in a bedroom, in addition to being used over the windows, can dress up a bed alcove or a dressing-room entrance and add a feeling of real luxury to the room. Where a bed with an upholstered headboard is used, an interesting effect is obtained by upholstering the cornice to match the headboard. Often the appearance of a bathroom can be improved with a cornice that hides the shower-curtain rod, in which case the cornice is made of hardboard so that it will not warp due to steam from the shower. Awning-type cornices installed over real or dummy windows in the basement playroom are unusual and cheerful. They can be supported on a hardboard backing or hung on a heavy wire frame like exterior awnings. Gay red-and-white striped patterns are the most popular for this use.

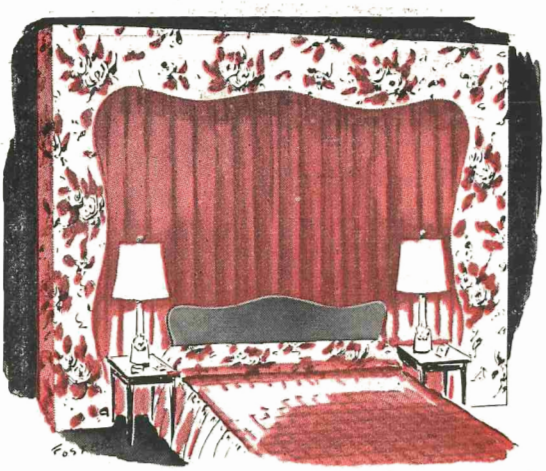
Other places around the house where cornices of various types can be employed with good effect are over bookshelves and across archways between rooms. Interesting illuminating effects can be produced by incorporating fluorescent lamps in cornices. Depending on the way in which the lamp is mounted, you can get direct downward

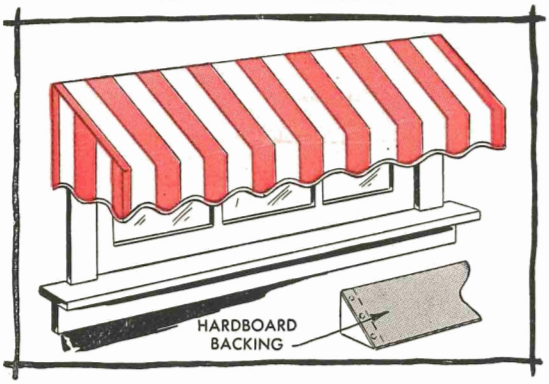


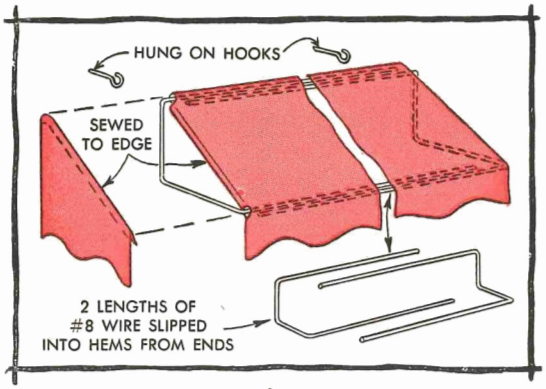
Bedroom-window cornice, above, is upholstered with same material as bed headboard. Cotton padding tufted with furniture nails produces the quilted effect

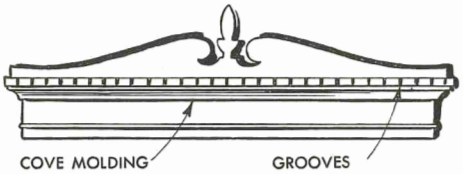
Long, narrow window cornices, above, serve a dual purpose when used to conceal fluorescent lamps for indirect lighting. Cornices over alcove and bookshelves, below, are scrolled to match bed headboard









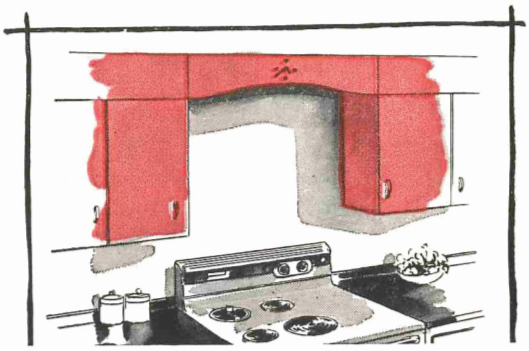


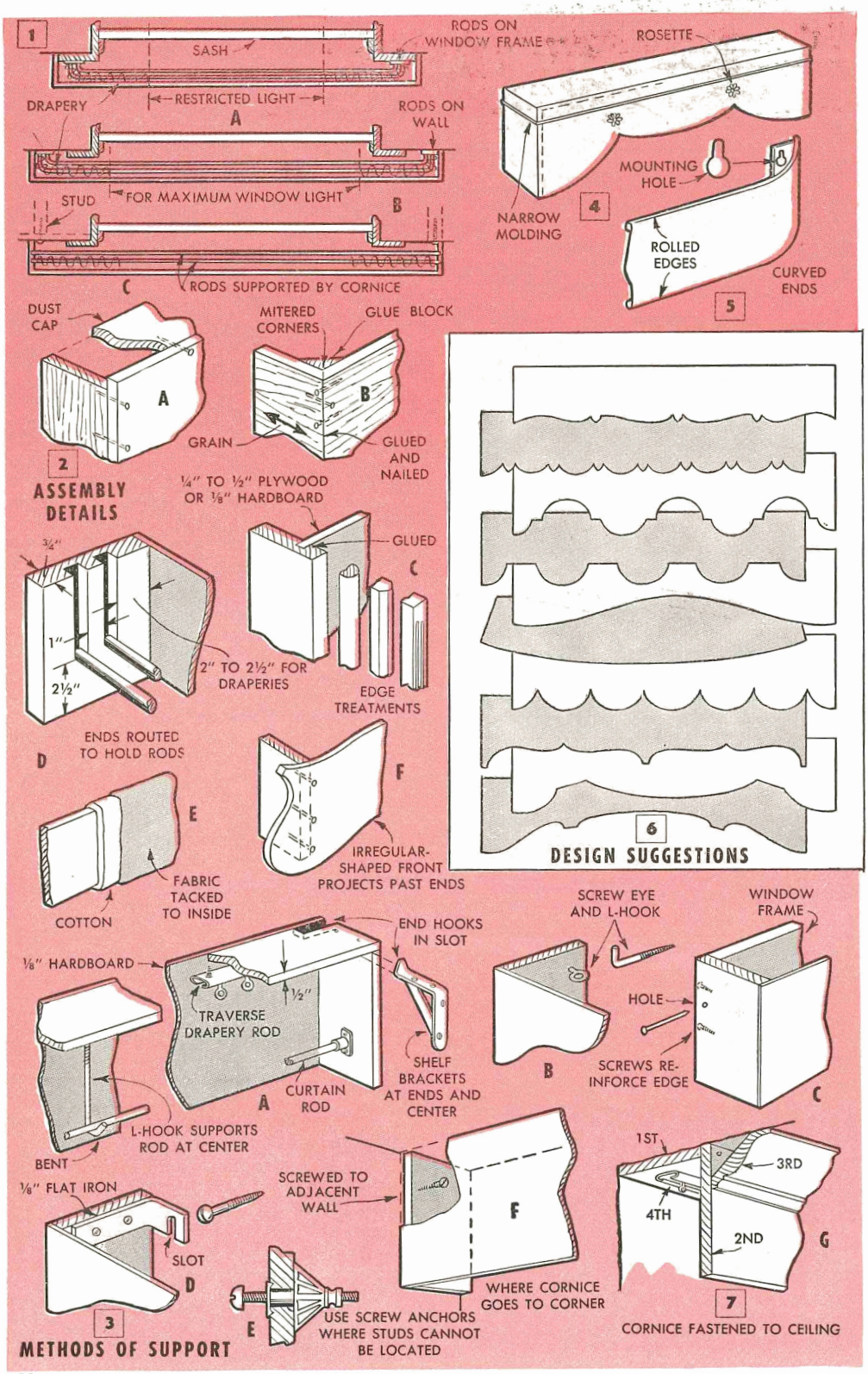
illumination or indirect ceiling light.

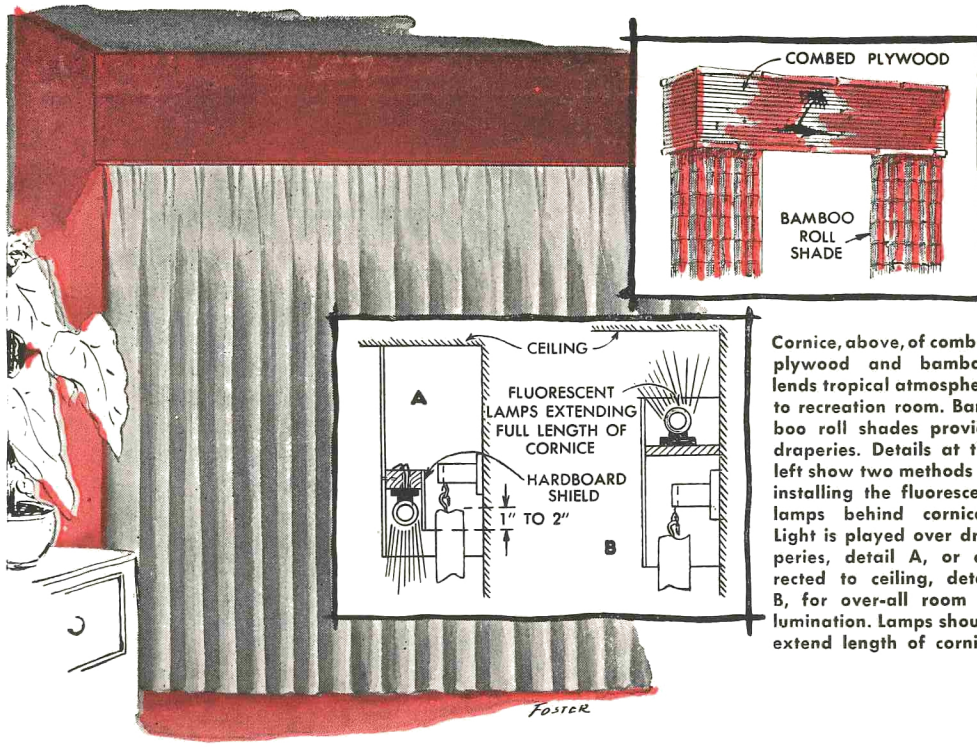
In designing cornices for your windows, here are some things to remember. Wooden cornices, if long and wide, often require scrolled breaks or curves to produce more pleasing effects (see Fig. 6). To soften the severity of lines or to "lighten" plain cornices, a cloth flounce is sometimes tacked to the lower edge. Narrow molding and rosettes, Fig. 5, often can be used to improve the appearance of a cornice. Instead of ending a cornice at each side of a window, you can get full light from the window by extending the cornice and draperies from 6 to 12 in. beyond the edges of the window if wall space permits. Cornices may be hung over curtain and drapery rods that are attached to the wall, or they can be built to include the rods, as shown in Figs. 1 and 2 on page 10. Cornices that support considerable weight must be of adequate strength and must be securely attached to the wall, preferably to the studs. The location of the studs may be a factor in determining the length of the cornices. If they must be fastened to the wall between stud locations, use screw anchors that spread behind the plaster, Fig. 3. Shelf brackets with ends bent upward to fit into a slot in the cornice, detail A, will provide adequate support for a heavy cornice if they are fastened securely to the studs. Other methods of mounting cornices are shown in Figs. 3 and 7, using shelf brackets at ends and center, slotted flat iron slipovers, screw eyes and L-hooks, screw anchors, etc.

Lumber, plywood and hardboard lend themselves best to the making of cornices by the average homeowner. However, sheet metal also can be used, as in Fig. 5, in which case you should have a tinsmith roll the top and bottom edges to obtain greater rigidity and to eliminate sharpness.

When making cornices to be painted or otherwise covered, simply nail the front to the ends as in Fig. 2, A, the grain of the endpieces running vertically. Use crack filler on the end-grain and to plug nail holes, sand it down flush when dry. When cornices are long and narrow, and also when

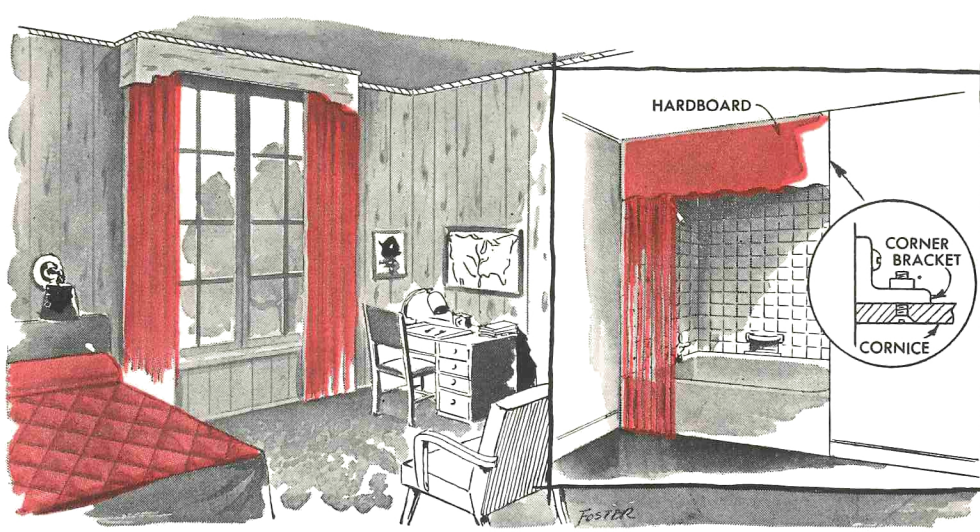



1
SASH
RODS ON WINDOW FRAME
DRAPERY
RESTRICTED LIGHT
A
RODS ON WALL
STUD
FOR MAXIMUM WINDOW LIGHT
B
C
RODS SUPPORTED BY CORNICE
ROSETTE
MOUNTING HOLE
NARROW MOLDING
4
ROLLED EDGES
CURVED ENDS
5
DUST CAP
MITERED CORNERS
GLUE BLOCK
A
B
GRAIN
GLUED AND NAILED
2
ASSEMBLY DETAILS
¼" TO ½" PLYWOOD OR ⅛" HARDBOARD
GLUED
C
¾"
1"
2½"
2" TO 2½" FOR DRAPERIES
EDGE TREATMENTS
ENDS ROUTED TO HOLD RODS
D
E
F
IRREGULAR-SHAPED FRONT PROJECTS PAST ENDS
FABRIC TACKED TO INSIDE
COTTON
6
DESIGN SUGGESTIONS
SCREW EYE AND L-HOOK
WINDOW FRAME
END HOOKS IN SLOT
⅛" HARDBOARD
½"
TRAVERSE DRAPERY ROD
HOLE
SHELF BRACKETS AT ENDS AND CENTER
B
SCREWS RE-INFORCE EDGE
C
A
CURTAIN ROD
L-HOOK SUPPORTS ROD AT CENTER
BENT
1ST
3RD
⅛" FLAT IRON
SCREWED TO ADJACENT WALL
F
4TH
2ND
G
SLOT
D
WHERE CORNICE GOES TO CORNER
7
3
E
USE SCREW ANCHORS WHERE STUDS CANNOT BE LOCATED
CORNICE FASTENED TO CEILING
METHODS OF SUPPORT

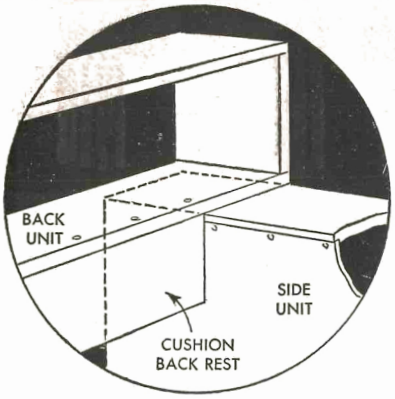


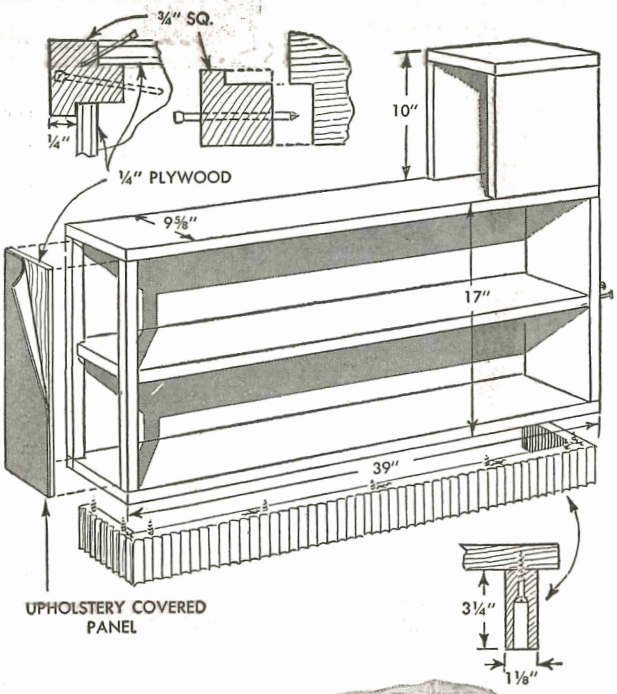
Cornice, above, of combed plywood and bamboo, lends tropical atmosphere to recreation room. Bamboo roll shades provide draperies. Details at the left show two methods of installing the fluorescent lamps behind cornices. Light is played over draperies, detail A, or directed to ceiling, detail B, for over-all room illumination. Lamps should extend length of cornice

light plywood or hardboard is used for the face, greater rigidity is obtained by adding a dust cap across the top. If cornices are to be stained or finished in a natural color or made of combed plywood, the grain direction of the endpieces should match that of the frontpiece, and the corners should be mitered, glued and nailed, detail B. Another method of assembly is to glue the front into grooves cut in the endpieces. However, the ends become more pronounced in this type of construction. For holding two plain curtain rods in a relatively short cornice, the endpieces can be routed, Fig. 2, D, or slotted with a saw, the lower portion being closed with plugs. On curved or irregular-shaped cornices, the front may have to project past the ends as in detail F. When covering a cornice for an upholstered or quilted effect, use cotton upholstery padding before applying the covering material as in detail E.

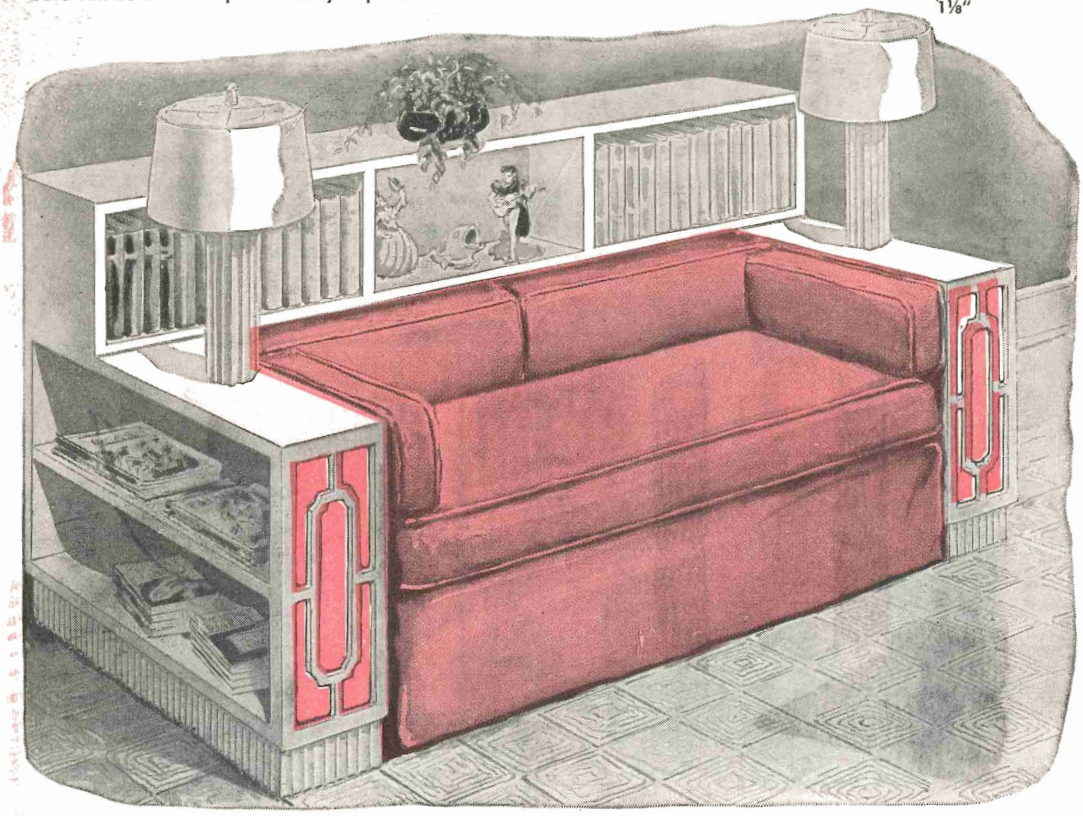


"Studioettes"—with UNIT END

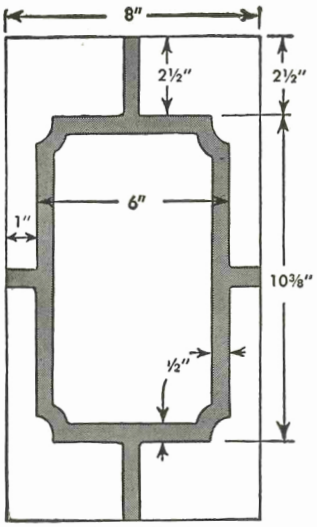




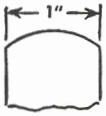
For the connecting bookshelf idea the stepped tops of the end tables are omitted as shown above. The separate book section simply sets in place, making the whole thing easily portable and especially suitable for small apartment use. Although shown open, the back of the top unit can be closed with plywood. Arm and back cushions are tailored to come flush with the tables, and twin lamps matching the fluting on the base can be attached permanently in place



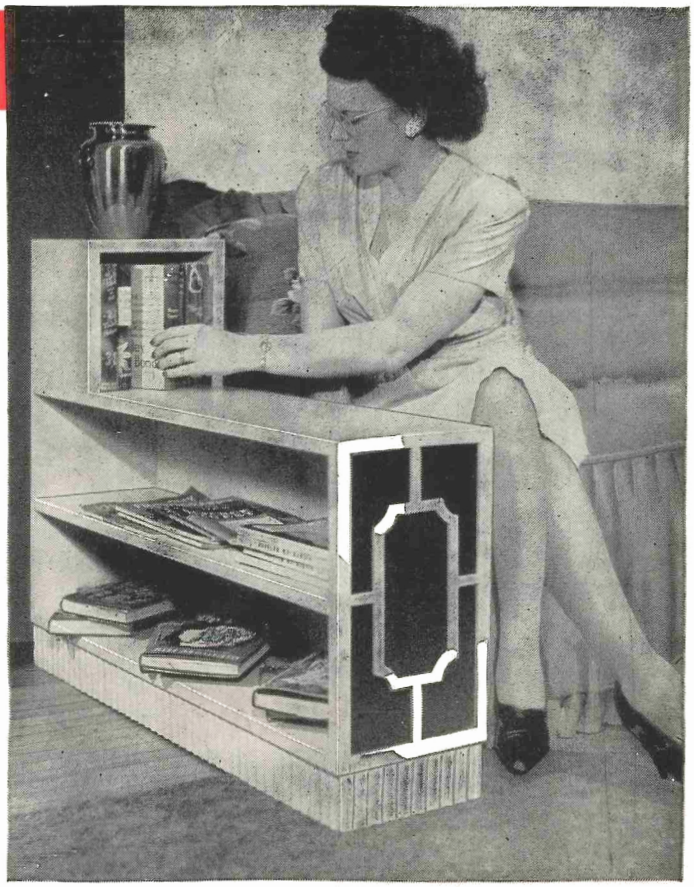
TABLES

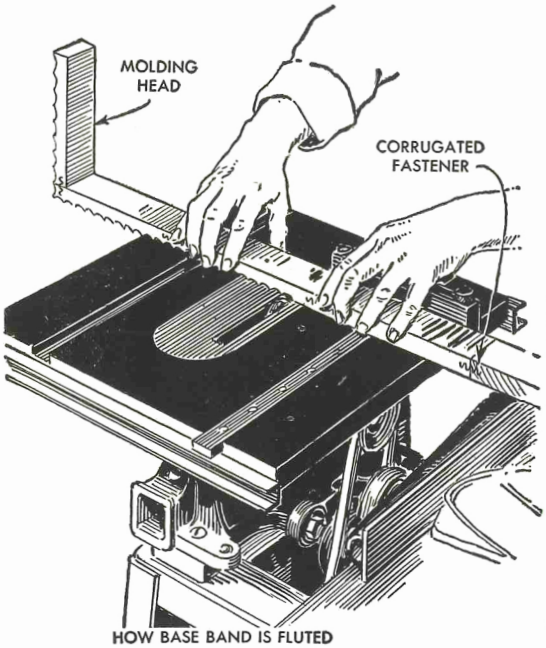


FRETWORK PATTERN



SHAPE OF CUTTER BLADE





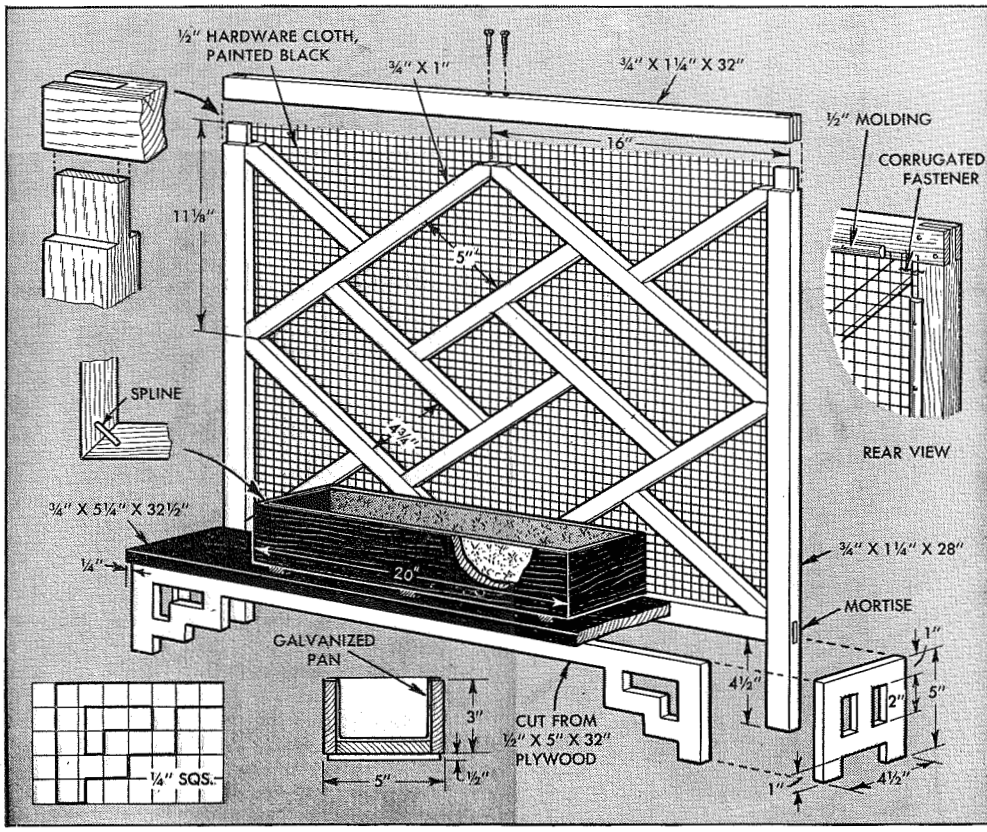
HOW BASE BAND IS FLUTED

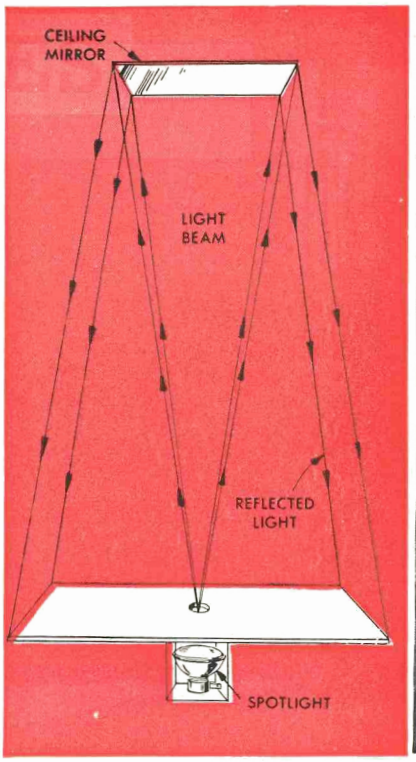
By Wayne C. Leckey

USE them at each end, or join them across the back with a book shelf and see what a lift these unit end tables give that dated studio couch. Pine will do for a painted finish and you can "upholster" the fronts to either match or contrast with the couch covering. The couch at hand will determine the size of the tables. Using common 1 by 10 lumber (actually ¾ in. by 9¾ in.), you'll only have to cut the pieces to length. Two ¾-in.-square posts form the fretwork opening, these being rabbeted as shown to take plywood panels. The cloth-covered panel must be slipped in place before the top board is fastened and is held with small brads. Then the facing fretwork is fitted flush in the opening. The base is built up of random widths of 1⅛-in. stock with the grain running up and down. If you don't have a molding head, the fluting can be done by hand with a 1-in. gouge and then smoothed with a sandpaper block. Screws in counterbored holes are used to attach the base to the table, ¾ in. in from the edge.

Chinese-Modern "FIRE SCREEN"

FROM a decorative standpoint, the blackened interior of an unused fireplace is an eyesore, especially during spring and summer months when color is necessary to give a new lift to old surroundings. That's when you need this attractive trellis "fire screen" to camouflage the opening. Chinese in motif both in color and design, the screen, when augmented with a growing or artificial vine, provides a smart summer treatment for an uninviting fireplace. The outer framework of the trellis is mortised at the corners. Then the diamond shape in the center is fastened with long screws and the remaining parts with corrugated fasteners. The back of the trellis is covered with hardware cloth which is painted black to contrast with a Chinese-red framework. The base and shelf of the screen are cut from plywood, and the wooden flower box, mitered and splined at the corners, is fitted with a copper lining. The flower box and shelf are painted black to set off the red.



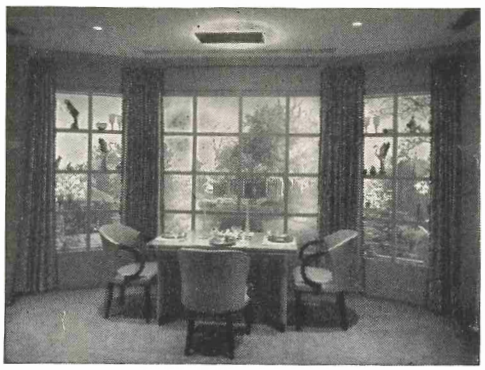


Photos courtesy General Electric Co.

GLAMOURIZE Your DINING TABLE

By Morris Tanenbaum

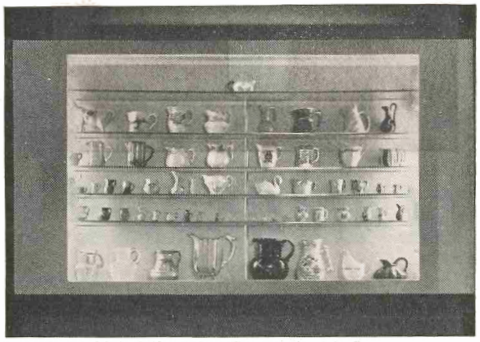
INDIRECT lighting reflected from the ceiling above your dining table adds sparkle to the formal dinner without the tiring glare of direct lighting or the shadowy uncertainty of candles. The diagram above shows the setup, the spotlight under the table being trained on a mirror attached to the ceiling. The light beam passes through a 2⅝-in. hole bored in a table leaf. The size of the mirror, which is centered over the table, should be one half that of the table top. Use a projector-type spot lamp of 100 to 150 watts and mount it below the table top in a porcelain socket attached to a bracket. Enclose the light in a metal housing provided with a series of holes or louvers for ventilation. The wooden table leaf adjacent to the hole is protected with asbestos, and a glass centerpiece can be used to conceal the lamp. By forming flanges at the top of the metal lamp house, you can fasten it in place with screws.



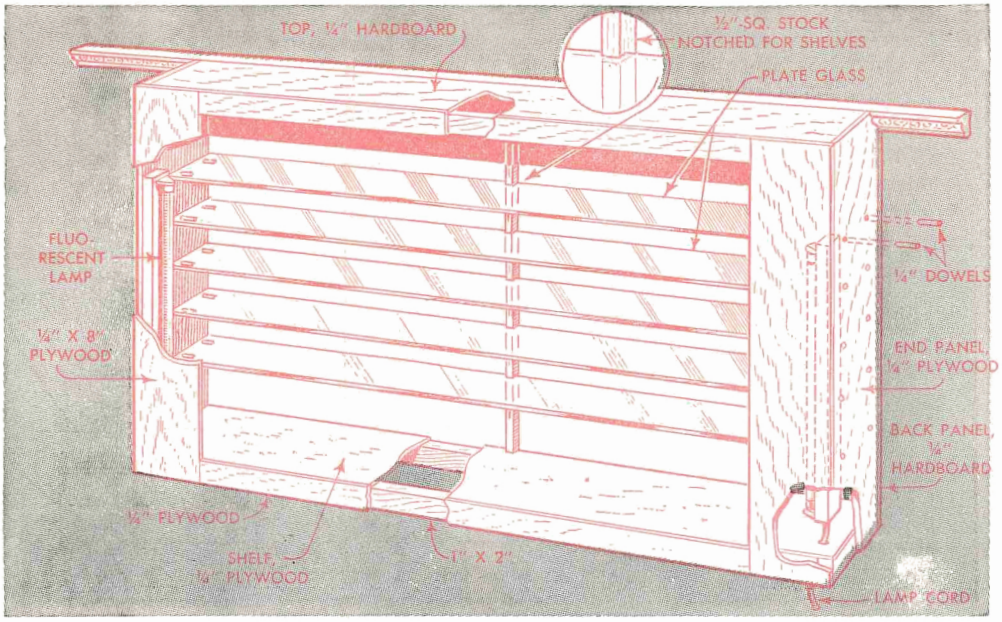
ILLUMINATED WALL CABINET

By Frank N. Stephany

Bathed in light from hidden fluorescent lamps, your prize china and pottery are proudly displayed on the glass shelves of this unusually attractive wall cabinet. The unit affords a distinctive solution to the problem of how to "fill in" an expanse of wall in the dining room or dining area and can be adapted easily as a decorative treatment for the kitchen or breakfast nook. The cabinet consists of a plywood-covered frame, a bottom shelf of ¼-in. plywood and several glass shelves, the latter being supported by dowels at the ends and a notched upright at the center. Fluorescent-lamp channels are installed at the sides of the front opening and wired so both lamps can be controlled with a single switch



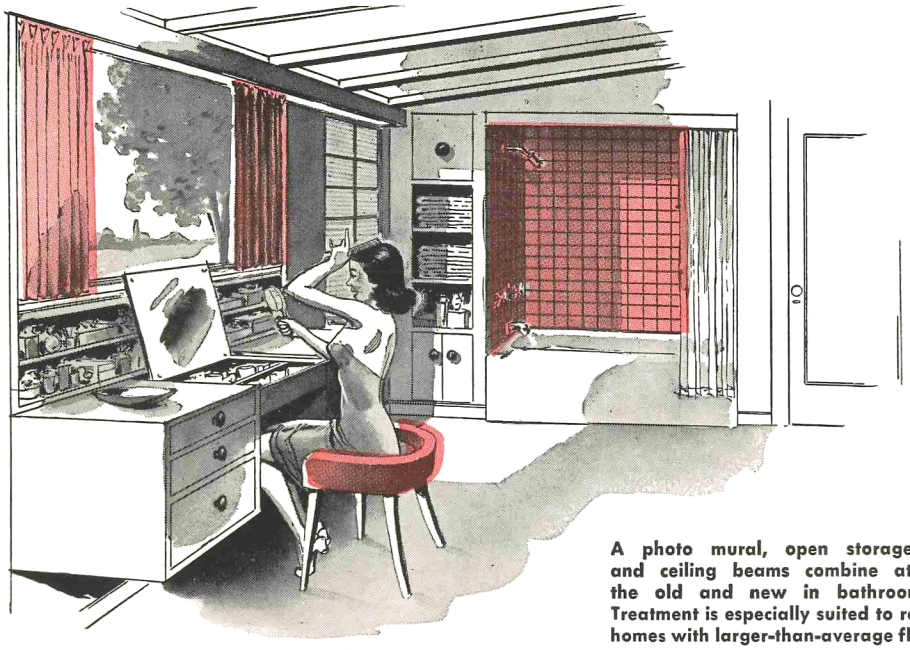
Photos and information courtesy General Electric Co.



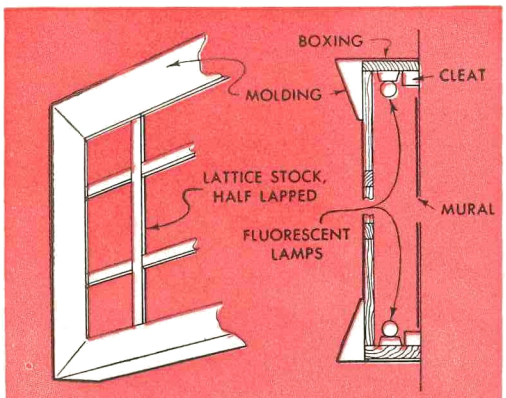
PICTURE WINDOWS

SCENIC window walls created by photo murals that permit you to "gaze out" at a majestic snow-capped mountain, the fascinating skyline of a bustling city or a sleepy seacoast village, are the perfect answer to the question of what to do with dead wall surfaces. When framed with draperies or scrolled cornices, or recessed into the wall for indirect lighting, these low-cost murals take on the appearance of real picture windows. You can have suitable murals made from your own prize negatives or you can purchase them in a wide range of sizes. The prints can be obtained in black and white or tinted, as desired.

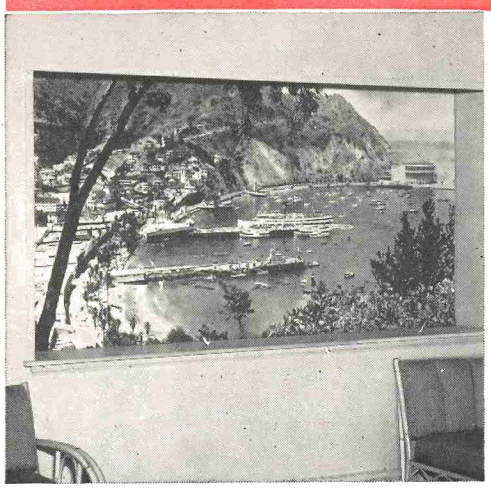
Unmounted prints are attached to plastered walls with ordinary wallpaper paste. To do this, first determine the exact location of the print on the wall by means of penciled lines, working from a base line which has been leveled, either horizontally or



A photo mural, open storage shelves and ceiling beams combine attractively the old and new in bathroom decor. Treatment is especially suited to ranch-type homes with larger-than-average floor areas



SIMULATED PICTURE WINDOW OR SHADOW BOX



vertically, with a carpenter's level. Moisten the print you have selected on both sides with a sponge and apply the wallpaper paste to the back. Then place the print on the locating lines previously marked on the wall and smooth it quickly with a wallpaper brush making sure that you leave no pockets of air behind the print. When you have it smoothed in place, wipe the print with a damp sponge to remove excess moisture and any wallpaper paste which may have gotten on the face of the print. When hanging unmounted prints containing two or more sections, note that the sections will be marked from left to right and the matching ends will be trimmed to allow a ¼-in. overlap.

Mounted prints usually are attached to plastered walls with nails or screws. If the plaster has been applied over wood lath, the screws can be driven through the print and plaster and into the lath. On some types of plastered walls it will be necessary to use wooden anchors (½-in. dowels will do) driven into holes drilled in the plaster. Small, flat-headed nails are then driven through the print and into the wooden anchors. The exposed nail or screw heads can be blended into the print by coating with opaque water colors.

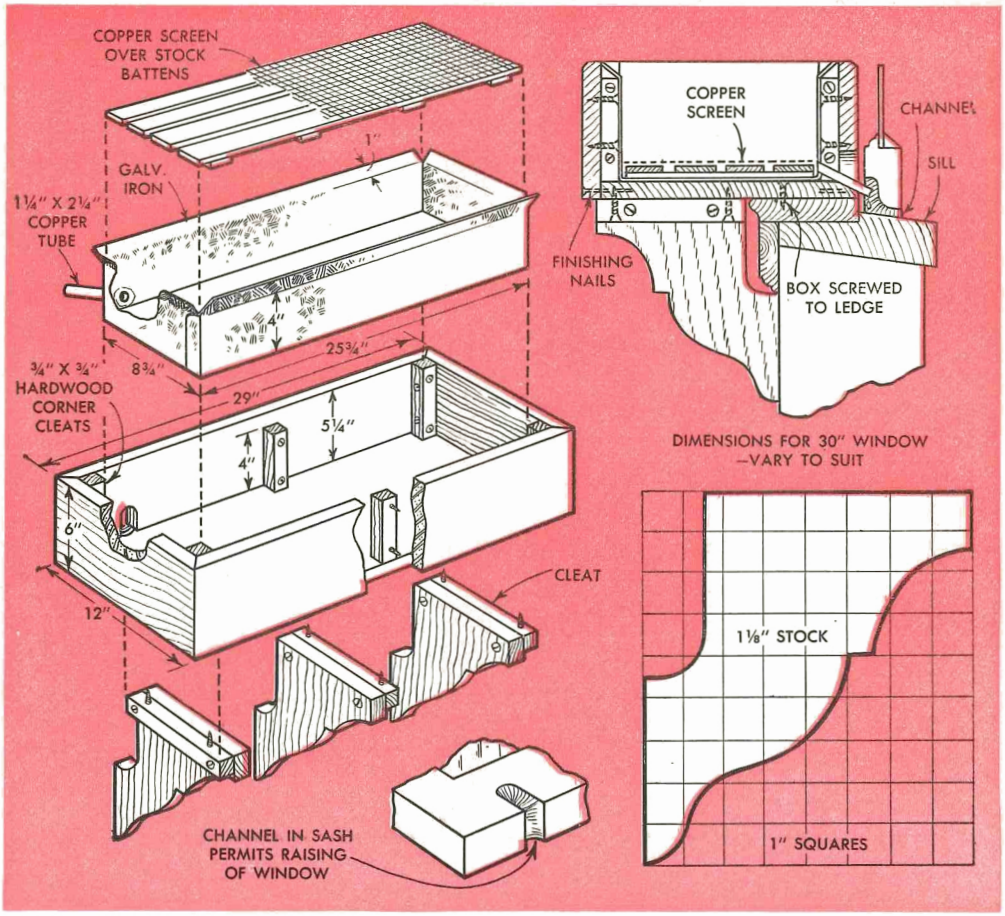
Lighting of the "windows" can be done in several ways but the details to the left on this page suggest a practical method of wide application which will make easy the task of converting bare walls to decorative picture windows in your home and opening new vistas to the eye.

Indoor WINDOW GARDEN

By Hi Sibley

BRIGHTEN UP a window in your home this winter with an attractive display of blooming flowers, grown easily in this simple-to-build indoor flower box. Fastened to the window sill with only two screws, the box is constructed so that the need for any other means of attachment, which might deface the wall or window frame itself, is eliminated. A feature of the galvanized-iron tank is a drain tube which is fitted to one side of the tank and slipped through a slot in the side of the box to allow excessive water to drain off through a channel cut in the window sash. The channel allows the window to be raised or lowered without interference from the tube. Copper screening laid over a stock-batten grid keeps the soil from sifting through.

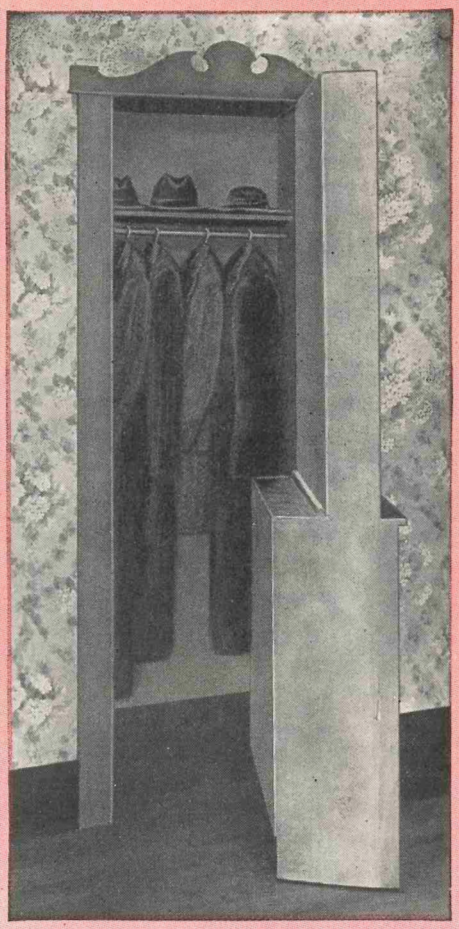
Braces for flower box, which are attached permanently to underside of box, provide support simply by resting against wall beneath window sill. They are cleated on sides as illustrated for added strength



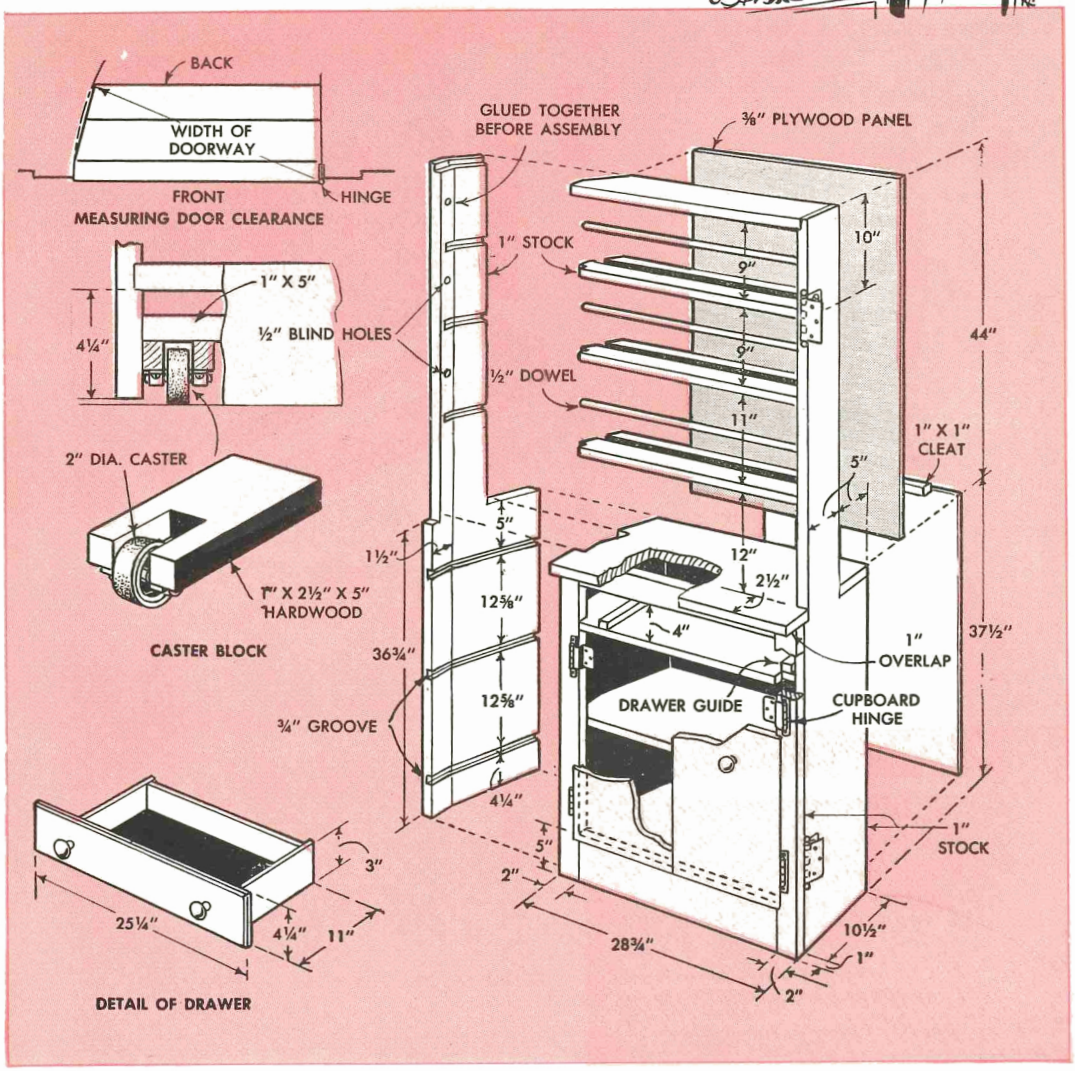
CLOSET-DOOR BUFFET

WHY NOT MAKE a closet door serve double duty?" thought Edward R. Lucas of Poulsbo, Wash., and here's how he replaced a standard door with an attractive swinging buffet. Fitted with shelves for china, a drawer for silverware and a cabinet for linens, this "built in" unit truly is the answer to the problem of space in small living quarters. A rubber-tired caster relieves strain on the hinges, and a strong friction catch takes the place of the regular door lock. Fitting the top of the door casing with a scrolled header adds to the deception and makes the door look even more like a built-in cabinet.

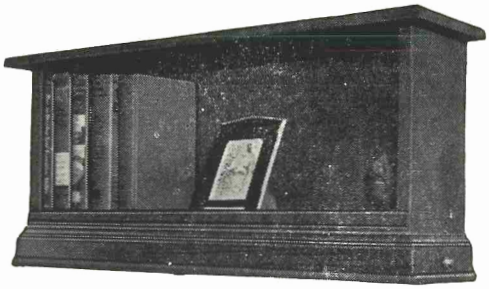
While over-all dimensions will have to be taken from the actual opening in each particular case, the drawings show how the cabinet is assembled. As weight is a factor to consider, a lightweight wood, such as pine, is best. This can be common lumberyard stock, the back being covered with either hardboard or plywood. The entire cabinet is made of 1-in. stock, which actually measures ¾ in. thick. To provide the necessary clearance for the buffet to swing properly, you'll note that the swinging side of the cabinet is built up of two pieces and joined at an angle. The degree of angle required is determined in the manner shown in the drawing. To obtain a close fit in the door opening, hang the cabinet be-



fore applying the casing, or trim. Then mount the caster on a block and screw the block to a ¾ x 5-in. board cut to fit across the bottom of the cabinet. When the cabinet is hinged and swings properly, nail the caster board between the sides of the cabinet so that the caster projects about ⅛ in. Make sure the caster is located so it will track on an arc. Otherwise, it will merely slide and mark the floor. Note that the shelves are grooved to support plates on edge, and that a dowel is fitted between the sides at each shelf to keep the plates from falling forward. When painting the cabinet, it will be found more convenient to paint the upper back panel before nailing it in place. Nail heads in the front facing of the cabinet should, of course, be set and puttied after the prime coat of paint has been applied.



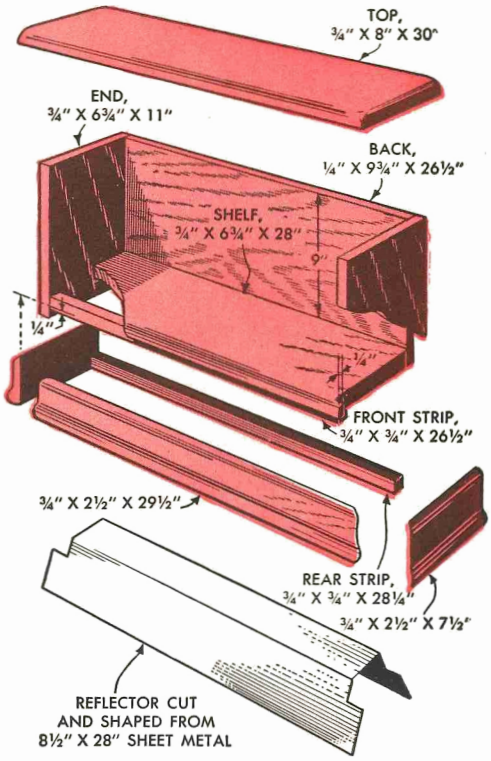
SHELF-LIGHT

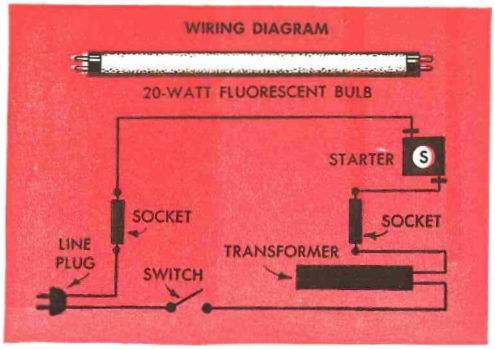


After fluorescent bulb has been removed, wall shelf can be set under window to double as floor bookcase

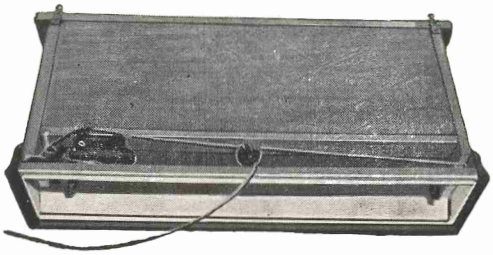
By W. C. Farley

STORAGE space for more than 20 books along with plenty of soft light for reading or writing are the features of this attractive shelf-light which is conveniently mounted on the wall right over a desk. The shelf is of simple box construction, the ends of the bottom piece being cut so that the front edge extends across the edges of the sides. Note that the distance between the underside of the shelf and the lower edge of the light-canopy molding must be at least 3 in., which is the depth necessary to conceal the 20-watt fluorescent tube. The sheet-metal reflector is bent lengthwise, as shown, the bend at the front of the reflector being about 3½ in. from the edge and the bend at the rear about 2¼ in. from the edge. The rear bend should be rather sharp, almost at right angles if desired, and the front is bent just enough to spread the reflector across the depth of the shelf. The fluorescent lamp is wired as in the diagram and a canopy-type switch is installed in the end molding. The transformer, or ballast, is bolted to the rear of the reflector so it fits beneath the bookshelf as in the lower right-hand photo. After the sockets and starter are attached to the reflector with machine screws, the reflector is screwed to the shelf bottom, the lower edge of the front molding and to the rear strip.





Baseboard outlet shown in center of the canopy, below, provides connection for an electric desk clock

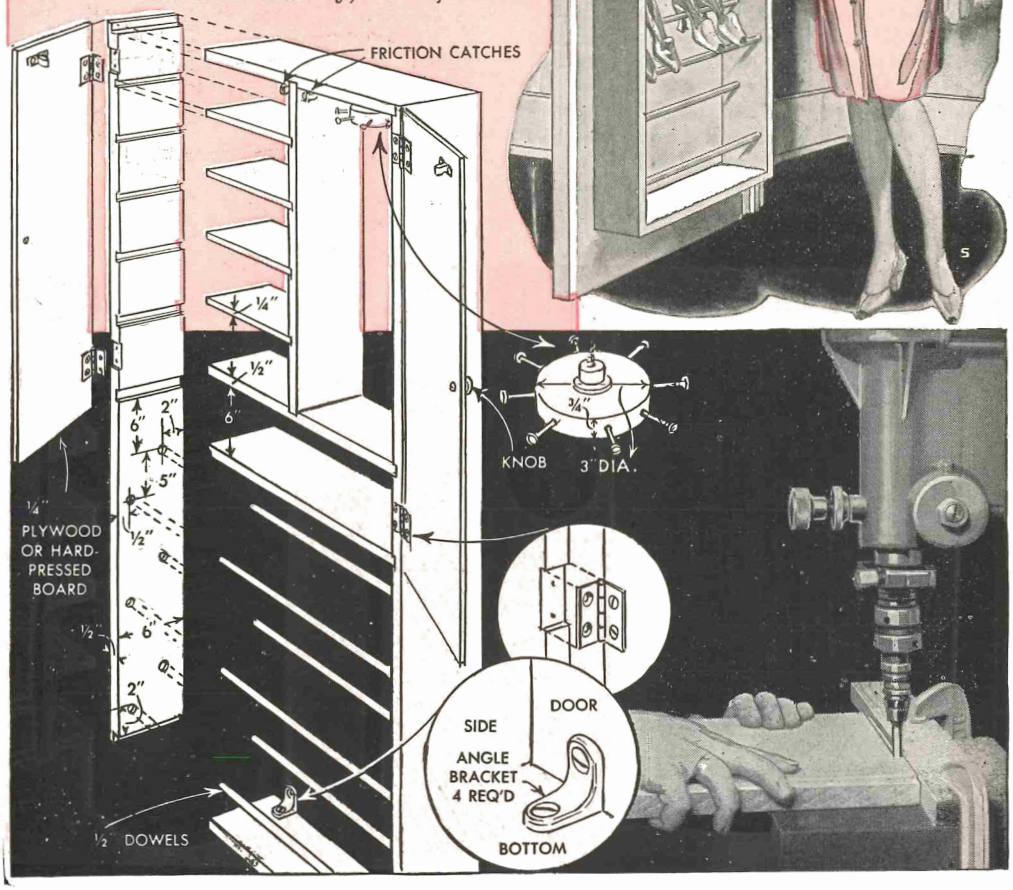


ON-A-DOOR CABINET

Saves Space

FOR those who live in small apartments, this clothes cabinet, which is attached to the inner side of a door, will increase storage space and permit shoes, ties, linens and similar articles to be stored neatly within easy reach. The cabinet frame is made of ½-in. stock cut to fit a door, and is grooved for shelves and a partition as shown. Staggered holes are drilled in the side members of the frame to take lengths of dowel, which form shoe racks, and the ends of the members are rabbeted for top and bottom pieces. Flush doors of ¼-in. plywood are provided with friction catches and glass knobs. A wooden disk and a spacer made by cutting a spool in half are screwed into the underside of the top to hold ties, nails being driven into the edge of the disk for this purpose. When assembled and finished as desired, the cabinet is attached to the door with angle brackets screwed to top and bottom pieces.

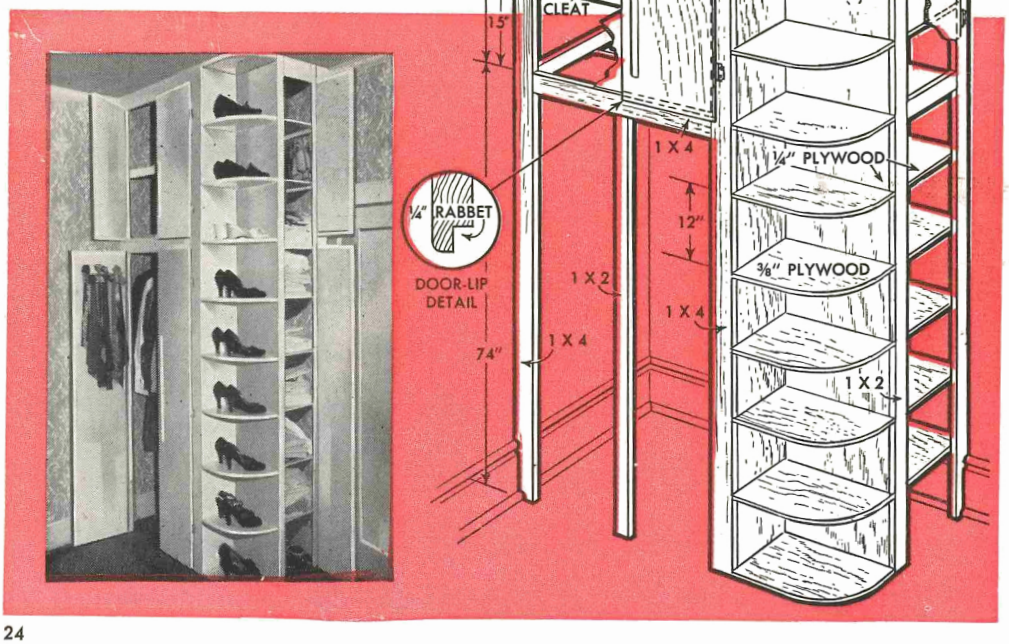
Newell D. Hartley, Devon, Conn.



Combination WARDROBE AND LINEN CLOSET

By Don Lippke

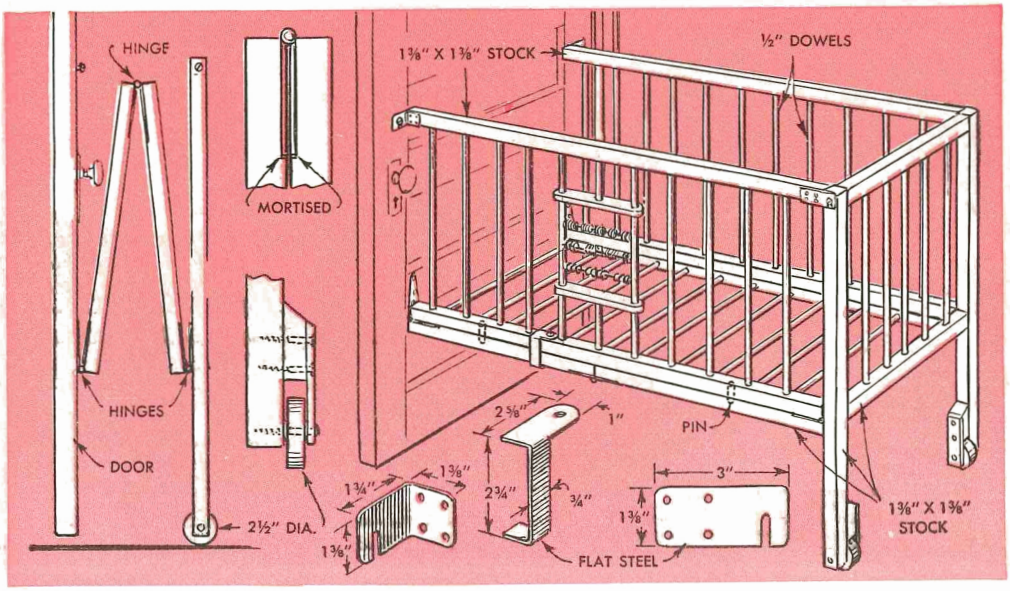
HERE IS ONE homeowner's answer to the problem of not enough closet space. Built in one corner of the bedroom, the cabinet-type closet takes little floor space, yet does a big job in taking care of shoes, clothes and hatboxes, as well as linens, towels and blankets. If you dislike using the open corner shelves for shoes as pictured, some of the shelves may be used to display decorative hosiery and handkerchief boxes, pictures, etc. The frame is made of 1 x 2s and 1 x 4s, as shown in the detail. Quarter round screwed to the walls and ceiling covers the joints between the walls and the cabinet. The remainder of the construction is of plywood, ⅜-in. being used for the shelves, ¼-in. on the walls and ½-in. for the doors. The doors are rabbeted, as indicated in the inset, to form a lip, and the door handles are made from quarter round. This is done for economy and also because the handles thus produced lend themselves nicely to the lines of the cabinet. The dimensions shown can be varied easily to suit the individual room in which the cabinet is to be built.



FOLDAWAY CRIB

By
Charles and
Bertram Brownold

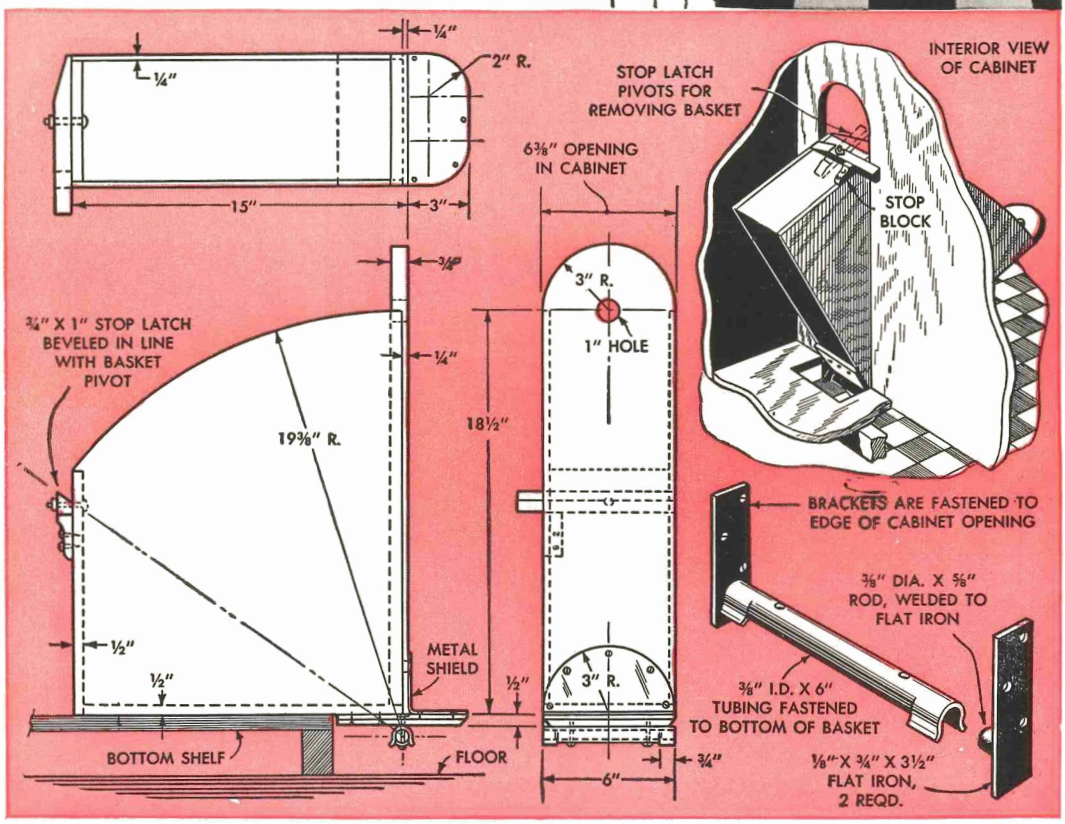
A TAKE-OFF on the space-saving idea of the in-a-door bed, this on-a-door crib will appeal to young parents living in limited quarters. Attached to the inside of a closet door, the crib, minus the sides, is designed to fold flat and to swing with the door. The closet, of course, provides convenient storage for the standard mattress and sides of the crib. The bottom of the crib consists of two hinged sections which are locked in the open position by the side panels. Holes for the side-panel dowels are aligned by clamping top and bottom rails together and boring at one time, drilling only about ½ in. deep into the top rail. Glue, plus wedges driven in saw cuts made in the ends of the dowels, anchor the latter in the rails. Projecting dowel pins in the lower rails of the side panels fit registering holes in the bottom assembly and a pivoted metal fixture clamps the two together. Slotted flat-steel plates engage round-headed screws to attach the side panels to the end panel and closet door.



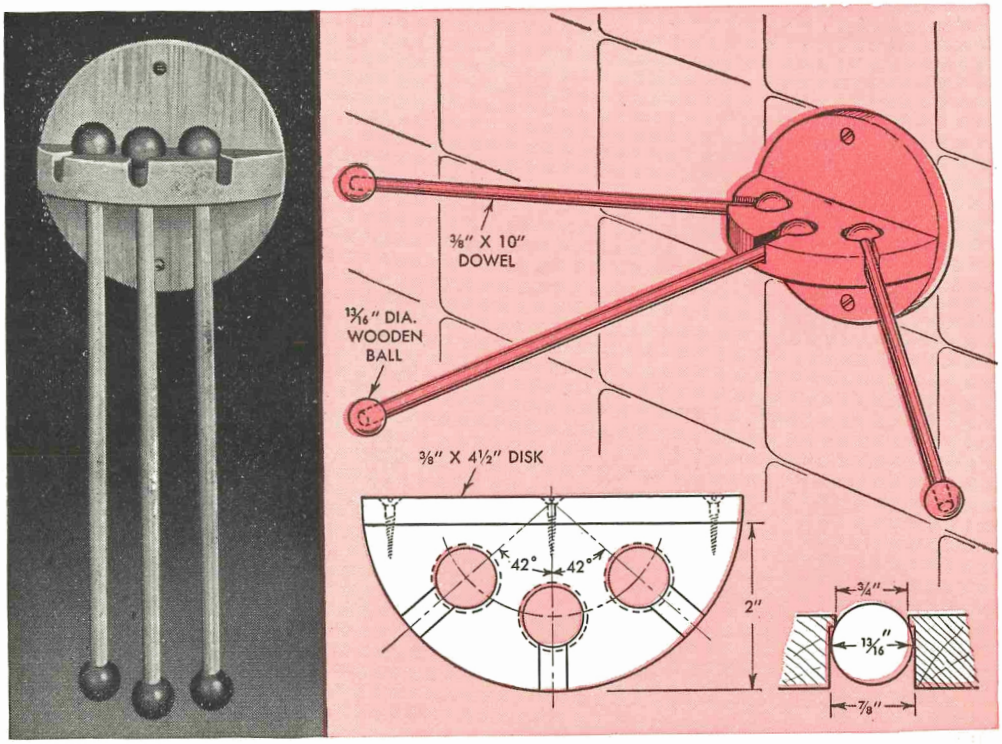
BUILT-IN WASTEBASKET

By E. E. Mason

IF YOU are building a new kitchen-sink cabinet or if the cabinet you already have provides the necessary clearance, you'll find this unusual wastebasket a time and space saver. The sides of the basket are of plywood but the end and bottom pieces are cut from solid stock. After cutting an opening in the sink cabinet, fit the front piece of the basket in the opening, allowing about 1/32-in. clearance to prevent binding. Rabbet the edges of the front piece for the plywood sides and join the sides to the front, back and bottom pieces with screws and glue. Provide a swinging stop at the back of the basket as indicated. The basket pivot unit is made up from stock materials as in the lower right-hand detail. In some kitchens the projecting treadle used for tilting the basket will be objectionable. In this case, the treadle can be omitted entirely and a handle provided at the top of the front piece, or the front piece can be made in two parts to form a toe recess for the treadle. When this is done, the pivot unit must be placed farther back.



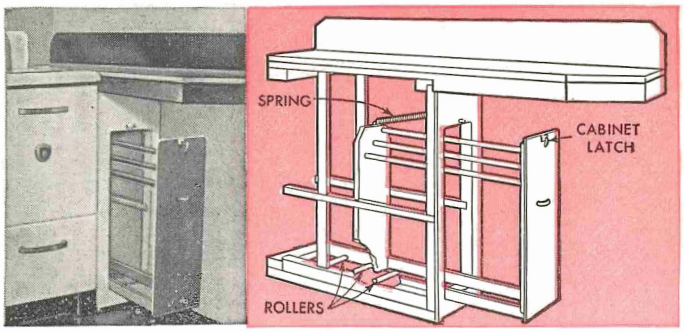
Folding Towel Rack for Kitchen or Bathroom



If you want something different in a towel rack, here's an exceptionally neat one that retracts against the wall. Lengths of birch dowel form the arms and balls turned from walnut are glued over the ends. Holes in the wall bracket must be counterbored carefully, as the counterbores serve as stops for the ball ends of the arms. To fold the rack, simply lift each arm and release it. The arm then falls to the vertical position as in the photo. Reverse the movement to bring the arms to the horizontal, or open, position

Combination Drier and Utility Shelf Installed in Waste Corner Space

Damp dishcloths and towels or an occasional piece of clothing can be dried out of sight, and the kitchen kept neat as a pin, if this combination drying rack and utility shelf is installed in space that otherwise would be wasted. Although the original unit was made to fit between a kitchen range and an adjacent wall, a similar rack can be fitted between cabinets or in any unoccupied corner. The drying rack consists of two plywood panels separated by lengths of dowel and bottom braces. Note that a window-shade spring is fastened to the back of the rack and the front panel covering the framework. This causes the rack, which is held closed with a cabinet-door catch, to spring open as soon as the catch is released. For smooth operation, the rack rides on dowel rollers. These revolve on pins made by driving nails into the ends of the dowels and filing off the heads. The plywood utility shelf can be covered with linoleum or hardboard. However, if you wish to set hot pots and pans on the shelf, cover it with sheet aluminum. If the installation is made next to an uninsulated range, be sure to mount a piece of asbestos between the drier and the range.

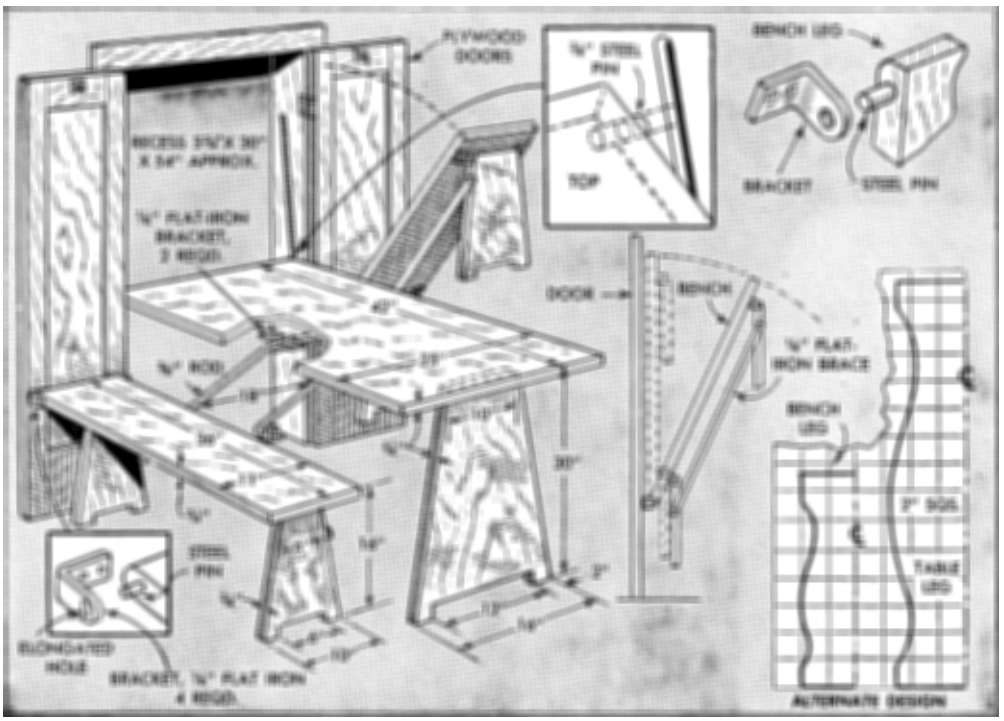


Breakfast Set Folds into Wall

By William H. Freeman

THIS FOLD-AWAY breakfast set has been designed especially to solve the problem of space in small kitchens. It seats four persons comfortably and when not in use the whole unit folds into the wall behind doors that close flush, leaving the wall and floor space clear. Note in the details below that the width of the table is given as 25 in. and the width of the wall recess as 30 in. The latter dimension is the approximate width of the wall opening before installing the header, false studs and jambs. Locating the breakfast set on an outside wall provides maximum depth for the opening and, if the unit must be installed in exceptionally limited space, some changes in dimensions may be necessary. Finish the wall opening and hang the doors first, then make the table and benches from ¾-in. plywood. Assemble the hinged parts with the special hinge fittings shown in the details. In the original design, the rear end of the table is guided by steel pins sliding in stopped grooves cut at an angle in the jambs. This construction can be simplified by using two hardwood strips nailed to each jamb and spaced to allow the pins to slide freely. Provide stop blocks at the lower ends of the guides.

When not in use, benches and table fold into wall behind doors that close flush, leaving wall space clear



Wooden Drying Rack Folds Into Cabinet

When not in use, this wooden drying rack is slipped out of sight into its own neat-looking cabinet which becomes an attractive whatnot shelf. Situated next to a radiator or hot-air register, it utilizes the heat to dry gloves, stockings and other small articles of clothing. The rack is formed of ⅜-in. dowels, which are glued at one end in blind holes drilled in a piece of 1-in. stock The other ends of the dowels are glued in holes in the underside of a second piece of 1-in. stock that becomes the top of the cabinet when the rack is closed. Another length of stock is screwed at right angles to the top piece, thus forming the top section of the cabinet front. A ⅛-in. strip is attached to the inside of the latter, forming a lip to hold the top in place when the cabinet is closed. A cleat is fastened to the back of the cabinet so the lower end of the rack will engage the cleat to hold the rack in a horizontal position. A ½-in. strip is fastened across the fronts of the dowels. This ½-in. strip is located to bear against the inside of the cabinet front and prevents the rack from sliding out when in the open position. The top of the cabinet projects ¼ in. at the front to provide a convenient finger grip for lifting the rack from its cabinet. When needed, the rack is pulled up and out and locks itself into position over the radiator or hot-air register. When not in use, it is hidden by the cabinet. The latter is of simple box construction made to suit the particular installation, which also determines to some extent the dimensions of the rack itself.

Walter E. Burton, Akron, Ohio.

Framed Opening in Partition Wall Forms Telephone Shelf

Good improvements in the home are simple changes in an existing home unit, such as this telephone shelf, that do something for appearance, increase value and add to the pleasure and convenience of daily living without being expensive, difficult or messy. To save steps when answering the telephone, one homeowner has built this "window" between the kitchen and living room of his home by cutting through the partition wall between studs and framing the opening. The window trim matches the woodwork in the room in which it faces. To close the window and prevent cooking odors from entering the living room, a sliding panel could be installed if desired and a wide sill for a note pad can be included.

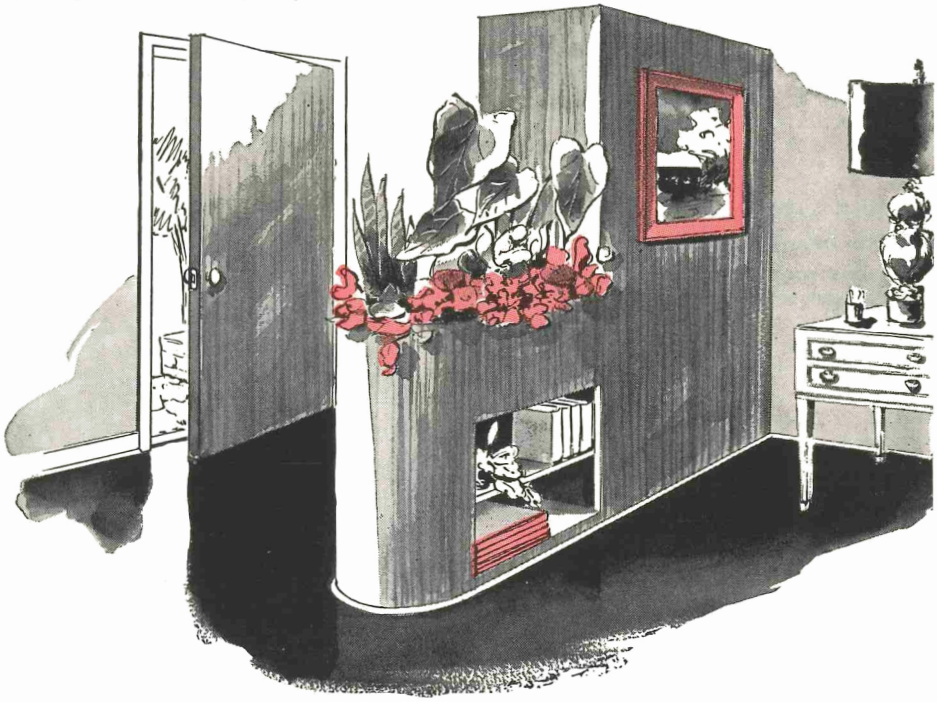
A. M. Wettach, Mt. Pleasant, Iowa.

Vertical Shoe Rack Conserves Closet Space When Mounted in Convenient Spot on Wall

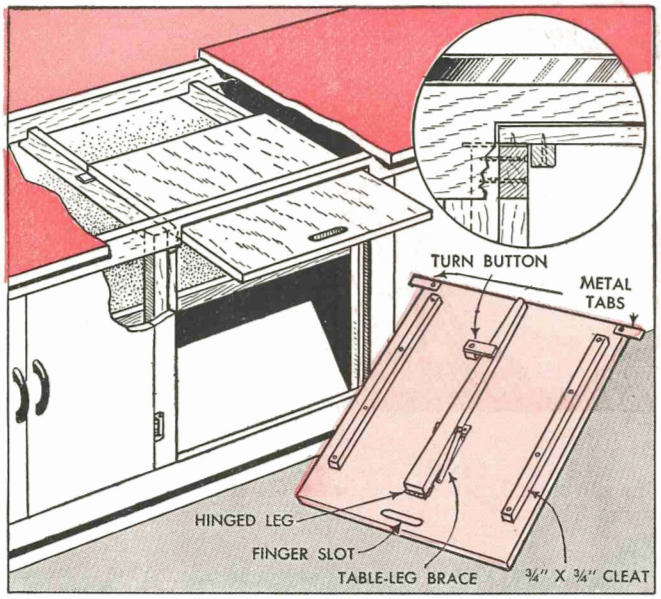
You won't stumble over shoes lying on the closet floor if you install this handy wall rack which holds 10 or more pairs of shoes. The rack is only 10 in. wide and projects 12½ in. from the wall. The height of the lower shelf is 7 in. for high-heel or work shoes and the remaining shelves are 4 in. high. These dimensions, of course, may be varied to suit the style of shoes commonly worn by members of the household. The curved mounting bracket and shelves are made of ½-in. stock or plywood, and three strips of lattice stock on each side hold the unit intact. The mounting bracket is screwed to the wall just above the baseboard, and the top of the unit is simply nailed to the wall or fastened with steel angle irons.—A. J. Price, Canandaigua, N. Y.

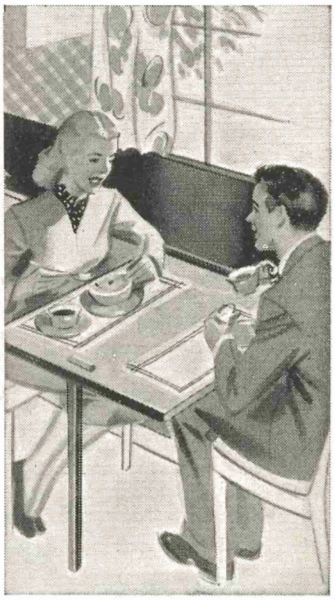
A clothes closet, planter and bookcase are built into this "island" entryway. Use textured plywood as paneling and plan unit according to space available

Built-In Entryway



Hideaway Breakfast Table for Small Kitchen





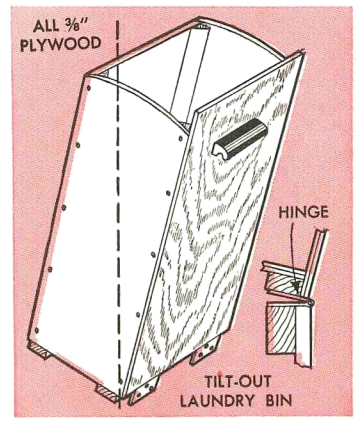
If your home does not have a breakfast nook and there is no room in the kitchen for a full-size table, this folding one will provide plenty of space for two people. Being installed in the utensil compartment of a built-in kitchen cabinet, the table doubles as a cabinet door and is out of the way until needed. The table top is a piece of ½-in. plywood which slides into the cabinet on 1 x 2-in. runners and pivots on metal tabs screwed to the underside at the rear corners of the top. These tabs project a short distance from each side of the table and are stopped by the front rail of the cabinet where they pivot on the cabinet uprights. Note in the circular detail that a portion of the rail is cut out to allow the table to drop down flush with the front of the cabinet. When making this cut, be sure to allow enough clearance for the back edge of the table to swing up and under the rail when pivoted. Wooden strips are fastened to the inside of the cabinet uprights to provide stops for the table when it is closed. Guides for sliding the table top along the runners are made by screwing ¾ x ¾-in. cleats to the underside of the top. The hinged leg is held in the closed position with a wooden turn button, and a card-table-leg brace holds it open. A finger slot can be cut near the front edge of the table or a handle can be made.

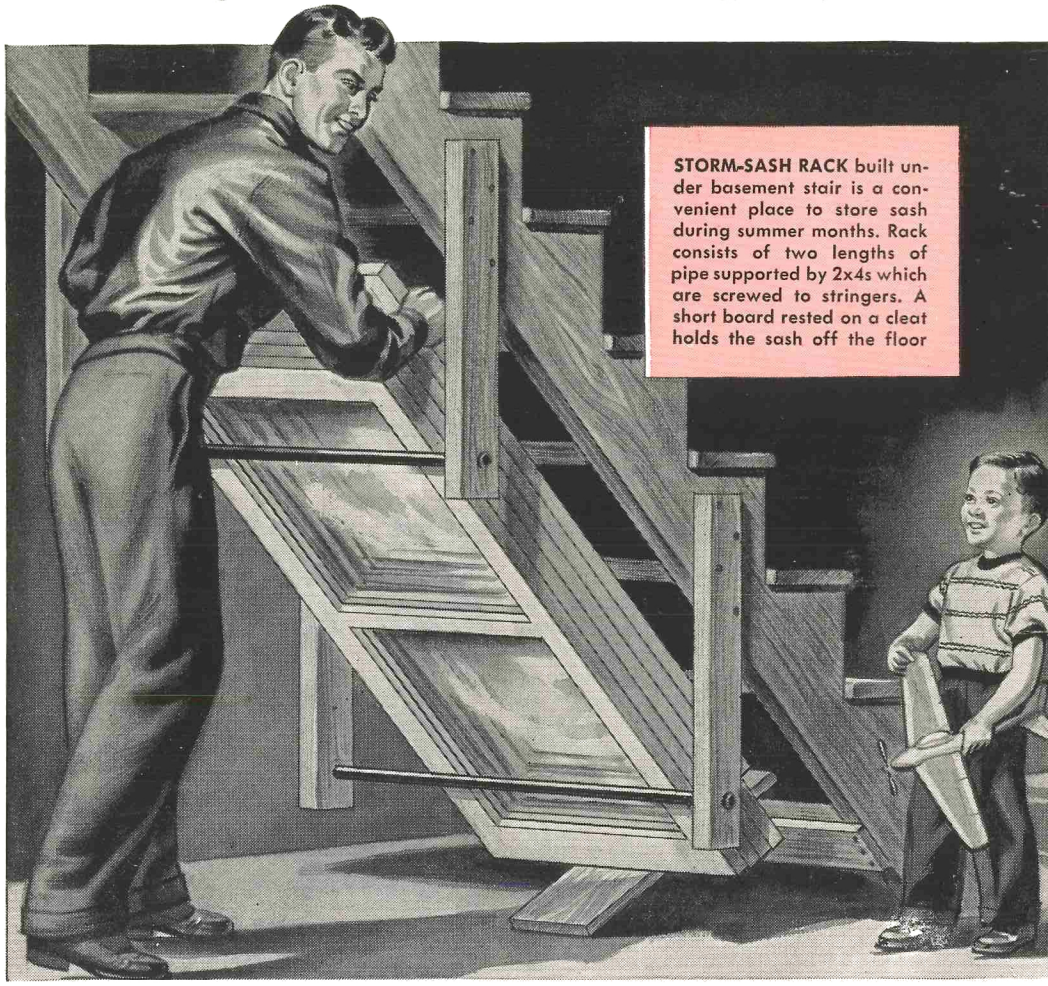
Handy Condiment Compartment Installed in Sink Cabinet

All that is necessary to install the condiment shelf is to measure carefully the space between the sink basin and the front of the cabinet and then build the compartment to fit. Nail a backing of ¼-in. plywood or hardboard to two side members of solid stock, nailing the latter to the cabinet posts. Then screw the shelf to the lower edges of the side members. Use the front panel to provide a door, mounting it on standard cabinet hinges and fitting it with a catch. A length of chain should be fastened at each end of the door to support it in the horizontal position. It will be necessary to bevel the edge of the rabbet at the top of the panel so it will not bind when closed.

Built-in Bins Utilize Waste Space in Rooms

Installed as built-in units under shelves and counters, tilt-out bins similar to the one shown will convert waste space into extra storage facilities in the kitchen, bathroom, halls and other passageways of a home. Built to dimensions required by a particular installation, each bin is made from ⅜-in. plywood reinforced in the corners with three-cornered wooden cleats. The back, sides and bottom of the unit are assembled with glue, nails and screws driven in from the outside, while the front panel is attached with glue and finishing nails. The bin thus formed is then hinged at the lower end to the bottom framing member. The front panel may be finished with varnish or painted to match the surrounding walls as desired.—Hi Sibley, Nuevo, Calif.





STORM-SASH RACK built under basement stair is a convenient place to store sash during summer months. Rack consists of two lengths of pipe supported by 2x4s which are screwed to stringers. A short board rested on a cleat holds the sash off the floor

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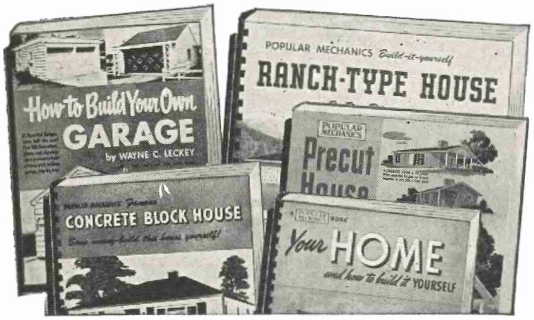

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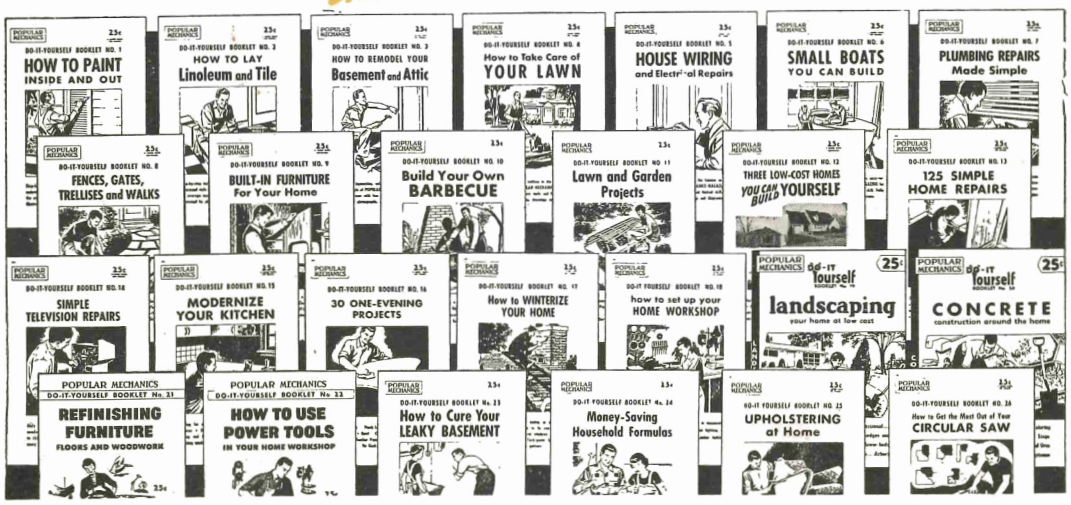

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